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RESEARCH IN HOME ECONOMICS AND AGRICULTURE[1]

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RECENT years have seen a striking increase in attempts by administrators and research workers to bring about more effective co-ordination and co-operation in research. This trend is not peculiar to agriculture and home economics but is characteristic of practically all subject matter fields.

The reasons for the development are obvious. Many of the problems now confronting us appear to be broader and more intricate than formerly. We are beginning to appreciate the fact that most problems have economic, sociological, or other ramifications hitherto undreamed of. Whether we like it or not, we are living in a complex world—a world strangely knit together by modern inventions and scientific progress, where distance means nothing and where upheavals in one locality may have repercussions in unexpected quarters and with startling results.

Agriculture is no exception to the rule; and thus we find that with the rapid changes in our agricultural policies and procedures and with the very definite trend toward even greater specialization in the agricultural sciences, many farm problems now require co-ordinated research between several subject matter departments. There are definite indications that in the years to come more and more of our agricultural problems will require this type of attack.

I do not mean by this that all individual effort and initiative must be smothered for the common good. There will always be specific problems which can be solved most satisfactorily by individual effort. And even in cases where co-ordination seems desirable, the plan will collapse unless individual effort has been encouraged as well as protected.

I have not interpreted the topic assigned to me as calling for any detailed discussion with reference to the mechanics of arranging or administering co-ordinated effort, but have chosen, rather, to illustrate by example how research in home economics can be co-ordinated with agriculture and to suggest certain problems wherein co-ordinated effort would be of mutual benefit to both groups.

Before entering into this phase of the discussion, however, I should like to refer briefly to a few important principles which, in my opinion, must receive full recognition as essential to the success of any co-ordinated program of research.

To begin with, we must have a suitable master plan of work in which the problem is viewed as a whole and then broken down into its component parts. In formulating this plan, the advice of laymen such as growers or consumers should receive careful

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consideration along with that of the specialists from the various subject matter fields. The rights of the individual worker must be protected in this plan and the responsibilities and obligations of all concerned fully understood and agreed upon.

A common point of view and interest in the problem from its broadest aspects are of paramount importance. Informal conferences between the various workers are helpful in this connection and serve to keep each person informed of what the others are doing.

There must be a minimum of administrative red tape. As Dr. James T. Jardine said at a recent meeting of the Land-Grant College Association:

> Organization and coordination are not an end in themselves. It is our joint responsibility to see that they are not over-emphasized to the point of diminishing returns from research. We must have effective research by individual workers or we may have a coordinated plan without results.

Finally, and perhaps most important of all, the spirit of frankness should pervade the entire undertaking. Successful co-ordination requires co-operation, and co-operation is sometimes difficult to achieve because you are dealing with personalities. Complete frankness between all parties in the undertaking is sound insurance against many of the personal difficulties which arise from time to time.

In illustrating how research in home economics may be co-ordinated with research in agriculture, I should like to refer to the potato program recently started at the Cornell University Agricultural Experiment Station. I do not wish to imply that our program is by any means perfect or that it should serve as a model for future attempts along these lines. We have made some mistakes and have had a few difficulties to overcome. In spite of these, however, the program has been under way for approximately three years, and we are very well satisfied with the results to date.

The potato has long been one of New York State's most profitable crops. In recent years, however, potato production in western New York has been declining, and the prices obtained for the Smooth and Russet Rural varieties grown in that part of the state have been lower than those obtained for other varieties of potatoes grown elsewhere in the state and in the nation. One solution of this problem would seem to be that of growing Green Mountain, Russet Burbank, and other seemingly preferred varieties in our western New York area. Unfortunately, however, this part of the state is characterized by high temperatures and deficient rainfall during the summer months. The Smooth and Russet Rural potatoes happen to be the only varieties at present which will grow well and produce suitable yields under these conditions. The problem appears to resolve itself, then, into one of breeding a new potato which meets consumer demand and which can be grown at a profit in western New York.

At a series of meetings attended by prominent growers interested in the potato industry and by workers in the college and experiment station, the problem was discussed from all angles, and our present potato research program was the result. The work started with the aid of a special state appropriation, supplemented by federal funds appropriated under the Bankhead-Jones Act.

The program involves co-operative effort between ten departments—three in the College of Home Economics and seven in the College of Agriculture. Although the work as planned cuts very definitely across departmental lines, excellent co-operation has been shown by all of the workers concerned.

Since specific information is not available with reference to the type of potato most desired by the consumer, the departments of economics of the household and household

management, and institution management in the College of Home Economics are co-operating with the departments of agricultural economics and farm management and of vegetable crops in the College of Agriculture, in a study of consumer preference and marketing. Paralleling this investigation, the departments of foods and nutrition and of institution management in the College of Home Economics are co-operating with the department of vegetable crops in the College of Agriculture in an investigation of the cooking quality of potatoes. A study of the relation of crop rotations to potato production, including disease and pest control, and quality, is being conducted jointly by the departments of vegetable crops, plant pathology, entomology, and agronomy. The insect pests and diseases of potatoes are receiving concerted attention from the departments of entomology and plant pathology, special emphasis being placed on certain virus diseases which constitute a serious menace to the potato industry. Tuber defects and mechanical injuries are being studied jointly by the departments of vegetable crops, plant pathology, entomology, and agricultural engineering. The department of plant breeding, working in close co-operation with all of the other departments and with the United States Department of Agriculture, has expanded its potato-breeding program and has already made considerable progress in obtaining improved types of potatoes for production in New York State. All of the data obtained in our co-ordinated program will have a distinct bearing upon the potato-breeding investigations.

With everyone working toward the common goal of potato improvement and with the attention of ten departments representing various sciences focused upon the problem in a co-ordinated, unified program of attack, the New York State potato growers may reasonably look forward to a solution of their problem in the not too distant future.

Agriculture has numerous and perplexing problems, similar in many respects to the one I have outlined—problems of vital importance to the farmer and of just as vital importance to the consumer. What splendid opportunities these problems present for home economics and agriculture to unite in a concerted attack looking toward their ultimate solution!

Plant and animal breeding is expanding rapidly, and public interest in this field is keen. In our attempts to breed better plants and better animals, the needs of the consumer from the standpoint of nutrition, cooking quality, preparation waste, cost, and the like, should receive consideration. Proper co-ordination of home economics research with work in this field is highly desirable.

Much of our agricultural research has been directed toward improving the quality of our produce by methods other than breeding. This is a laudable ambition, to be sure, but I have sometimes felt—and this is a personal opinion—that in our zeal to grade closely, to eliminate the last codling-moth sting, or to prevent the last apple-scab lesion, we may have gone a little beyond the limits of sound economic practice. In other words, how much of this can the average consumer afford to pay for, and how far can the farmer go with these practices aimed at the "ultimate" without materially affecting his profit? Take the problem of grading, for example—most of our grades are artificial and arbitrary standards at best, and I venture to suggest that many of these grades are economically wrong, both for the farmer and for the consumer. The question is a live one and needs the type of research which can best be supplied by teamwork between home economics and agriculture.

Another important problem is that of the cost of marketing and distributing farm

products. The consumer has an interest in this because the price he or she pays depends in part upon these costs. Joint research from the producer-consumer standpoint would be of great mutual benefit.

Let us turn for a moment to the problem of industrial processing of foods. Many of these processes have been developed by industrial research, and any changes resulting from such research have been adopted by industry primarily for economic reasons. In many of these instances, the producer and consumer do not know whether the change is desirable from their standpoint. For example, frozen foods have been on the market for a long time, and we are just now beginning to ascertain the effect of quick freezing on vitamins and other nutrients—truly a fertile field for co-ordination.

While we are on the subject of foods, it might be well to mention the need for more information on nutritive value, methods of cooking, preservation, and new uses for various farm products used as food. These problems should be studied in relation to such variables as variety, methods of culture, disease and pest control, storage conditions, and the like.

We hear a lot these days about new uses in industry for products of the farm. This development is of great interest to the farmer because it may provide new markets for his products. The development should be of equal interest to the consumer because he is going to buy the articles which industry manufactures. New types of foods, improved housing insulation, plastics for walls, floors, and various household equipment are some of the products which already have been developed. Future possibilities in this direction are difficult to foresee. It does not, however, require much thinking to convince oneself that here is another field for co-ordination where there is everything to be gained and but little to lose.

The problem of farm labor is still with us, strange as it may seem. This problem is just as acute in the farm home. There is a distinct need for additional research on laborsaving devices and laborsaving methods for the benefit of both the farmer and his wife. Rural electrification is making possible great strides in this direction. It is up to those of us interested in agriculture and home economics to continue the good work.

These are but a few of the many problems in which home economics and agriculture have a common stake. Many of you could doubtless suggest others just as important, if not more so. With an overabundance of problems, all that is needed is the will to work jointly and funds and personnel to conduct the investigations. It seems to me that the will to work jointly is already a reality. The problem of funds will take care of itself as soon as the need for the work becomes apparent. There is a challenge to home economics, however, when it comes to personnel. It would be rather difficult at present to obtain many young people in home economics who are properly trained, especially in the basic sciences, for the conduct of research of the type needed in these problems of joint interest. This statement is made advisedly and with no attempt to criticize. Research in home economics will grow rapidly in the next few years, especially that research which touches upon agriculture. Now is the time to turn our thought and energy to the task of finding young people in home economics who possess a real interest in research as a career, of instilling in them the proper perspective and vision, and of providing them with a sound, fundamental training so that they will be ready for these important tasks which are sure to come.

FACTORS AFFECTING APPETITE

HELEN CAMP AND ERCEL S. EPPRIGHT

LACK of appetite, or anorexia, in children is an alarmingly prevalent condition. Perhaps it has always existed to a certain extent, but it seems to occur more frequently now than formerly. One is therefore inclined to believe that present-day habits of living or eating are in some way responsible for it. The complexity of the disorder is indicated by the variety of factors which may be involved. Anorexia may have its origin in the physiological, the psychological, the nutritional, the environmental, or even the hereditary factors.

While anorexia is usually defined as lack of appetite, it is probably also related to hunger. Although frequently confused, hunger and appetite are entirely different phenomena. Hunger is a sensation produced by the powerful contractions of the stomach, which begin as soon as the organ is empty or nearly empty. Hunger has a physiological basis and may be unpleasant or even painful. Appetite, on the other hand, is mainly psychological and generally pleasurable. So far as is known, there is no physiological mechanism related to appetite as are the contractions of the stomach to hunger, unless it may be hunger itself. Appetite is strongly colored by associations and traditions. Thus, the African Negro licks his chops over a meal of crawling ants. The Eskimo chews his blubber with zest (1). The Russian enjoys a steak from horse, and the French consider the snail a delicacy (2). The European scorns our humble pork and beans as we in turn do not relish the raw fish of the Scandinavians.

The ability of animals and human beings to select diets advantageous to their physiological well-being has been much discussed and studied. Among the earliest observations are those of Bunge. He held that the ingestion of foods rich in potassium resulted in losses of sodium from the body; and on this basis, he explained our craving for sodium chloride with such articles of diet as potatoes which are rich in potassium. Similarly he explained why cattle, whose natural diet is rich in potassium, travel unbelievable distances to reach a salt lick. When Mitchell (3) fed diets containing varying amounts of mineral matter to rats, she observed that they chose the minerals in those amounts and proportions which had previously been found most favorable to their growth and well-being. Harris (4), in similar studies on rats with vitamins, concluded that the power of selecting a particular food was possible only under certain special circumstances, and by no means always. The animals were able to choose the right food only if it "made them feel better" almost immediately after they had eaten it and only if it possessed some distinctive odor, taste, or appearance by which they could recognize it the next time it was presented. The more recent studies of Richter and others (5) do not entirely support the conclusions of Harris. In this most interesting series, rats offered 8 to 10 different foods, almost exclusively purified substances, were able to select a mixture of protein, fats, carbohydrates, minerals, and vitamins suitable for normal growth. The chief variations in consumption were in carbohydrates and fat. Some were apparently "sugar-burners" while others were "oil-burners."

The animals whose diets were deficient in vitamin B_1 promptly accepted this nutrient, whether it was offered in the form of yeast or in the highly purified crystalline state. So extraordinary was the craving for vitamin B_1 that the animals could not restrain themselves when allowed access to the container of yeast.

Although lower animals may possess some protective mechanism in the form of a drive or an urge which assists them in the selection of the proper nutrients, it is doubtful whether human beings are so equipped; not infrequently members of this species starve themselves for certain nutrients in the presence of plenty. Of interest in this connection is the study of Davis (6) with babies who were allowed to choose their diet from an assortment of foods, uncombined and simply prepared without the addition of salt or other condiments. The foods were presented without urging or solicitation, and in no case was anorexia observed. The babies grew at a rapid rate, and so successful were the results of the feeding program that Davis was led to conclude:

> The normal feeding habits of the older child are but a natural outgrowth of an early simple development. If he is properly handled the normal child should anticipate his meals with pleasure, should be glad to go to the table and will eat an adequate amount and variety of foods until he is satisfied. This will be enough to maintain the growth and development to which he is destined.

If there is an innate protective mechanism in human beings, it must be perverted very early in life, perhaps by psychological means or by the common practices by which the natural flavors of food are distorted. Otherwise, why should thousands of people die yearly from improper choice of food, and why should thousands of others given plenty fail to enjoy an optimal nutritional state?

Anorexia is lamentably widespread. Only half the preschool children (see page 153) in a recent study made at Texas State College for Women had good appetites, and this condition is believed to be general. Hunger strikes among children are all too prevalent. What a pity that in an age when we avowedly have a knowledge of nutrition capable of producing a "superior race of people," many refuse to accept it!

The following paragraphs outline the factors which influence appetite and hunger, a better understanding of which may aid in combating the ever-present feeding difficulties.

Physiological factors. As implied in the definition of hunger, the emptying time of the stomach is a factor of first importance. Various gastrointestinal disturbances and certain foods, fat in particular, delay the passage of food from the stomach. Not infrequently the anxious mother adds liberal amounts of butter or cream to the diet of the rebellious child, hoping in this way to increase the nutritive value of the meager diet. In so doing, the emptying of the stomach will be delayed perhaps beyond the next mealtime. In consequence, the child will fail to have the natural stimulus provided by the contractions of an empty stomach, and the cycle will continue. Kerley (7), writing recently on this "world-wide complaint of anorexia," holds that habitual loss of appetite in an otherwise healthy child may often be due to a stomach containing food residue or mucus, or both, in considerable amounts four hours or more after feeding.

That constipation is sometimes responsible for loss of appetite is shown by the studies by Lucas and Pryor (8) on 100 children in whom appetites were improved as colons were emptied in response to diet therapy.

Lack of appetite is so frequently related to infections that it is often taken as an indication of present or impending illness. According to Bartlett (9), the most common pathological conditions associated with marked loss of appetite are, in the order

mentioned, septic tonsils and adenoids, acute infectious diseases, tuberculosis, pyelitis, and dental caries. According to Schlutz (10), focal infections about the head are decidedly the major cause of anorexia in children.

There is a current view that general hunger may be associated with a lowering of blood sugar. Since blood sugar is a common substance into which certain other nutrients are convertible, its concentration in the blood may indeed serve as an index of the nutritional needs of the body. It is a fact that a sensation of hunger is one of the first effects of lowered blood sugar resulting from the action of a dose of insulin; however, it is also true that hunger is a very prominent symptom in diabetes, a condition in which the sugar of the blood is permanently raised.

Nutritional factors. The relationship of nutritional factors to appetite is not clearly understood. Failure of appetite is a common observation on animals with various dietary deficiencies. Nevertheless, with the exception of vitamin B_1, no special nutrient has been accredited with an appetite-promoting function. Sherman (11), in summarizing this relationship, says that vitamin B_1 has an important influence on the stimulation of appetite and that the relationship is more specific than that of any other known nutrient. The vitamin does not operate by making the food more appetizing. It seems to have a stimulating effect on the animal itself, "upon appetite as a physiological function." Vitamin B_1 fed separately induces a return of the appetite to such an extent that the animal resumes eating food it has once refused. Testing the efficacy of vitamin B_1 with infants affected with anorexia, Hoobler (12) gave brewers' yeast and observed the disorder to disappear in many cases. Infants who were refusing their formulas consumed normal or even more than normal amounts of food, supposedly in consequence of the vitamin adjuvant. This investigator concluded that every infant should have an addition of vitamin B_1 to its formula; just as orange juice and cod-liver oil are prescribed as routine measures to insure an adequate supply of vitamins C and D, a vitamin B_1 adjuvant should also be given. The use of vitamin B_1 to stimulate appetite in human beings has made a popular appeal, but further investigations regarding its efficiency are needed. Vorhaus and others (13), using crystalline vitamin B_1, observed improvement in appetites of several clinical patients.[1]

One quart of milk a day for children is a dietary slogan which has been widely accepted, but which is sometimes questioned, partly because of its influence on the appetite. Aldrich (1) points out that milk is one of the foods which is most slowly passed out of the stomach, partly because of its fat content and partly because of the tough curds formed when it comes in contact with gastric juice. Because milk delays the emptying time of the stomach and thus interferes with the hunger contractions, he questions the advantage of "pouring it into unwilling eaters." Lucas and Pryor (8) accordingly observed the appetites of children when milk of the diet was reduced or in certain cases eliminated. The substitution for it of one quart of fruit juice apparently had a stimulating effect on appetite. Siemsen (14), however, fed two or three quarts of milk daily and observed no adverse effects on appetite. The relation of milk consumption to appetite,

[1] Since this paper was written, further observations on the influence of vitamin B on the appetites of children have been reported by Schlutz and Knott. These investigators concluded that with children from 4 to 11 years, the daily addition of 120 to 200 units of vitamin B to intakes averaging 260 to 420 international units tended to stabilize the appetites and did not apparently force growth. (Schlutz, F. W., and Knott, E. M. *Journal of Nutrition*, Vol. 15, May 1938.)

therefore, remains somewhat unsettled. An uncooked base-forming diet was successfully used by Kugelmass and Samuel (15) with carefully selected children affected with anorexia. No foods except fruit juices were served between meals, no sugar and butter appeared on the menus, and no cooked food in any form was given. All children were eager to eat after a week of this regime. Improvement with some was noted as early as the second day.

A limited number of investigations has been made on the relation of other foods to appetite. In feeding rats, liver has been observed to stimulate appetite. It has been suggested that the cereal content of the diet bears a possible relation to appetite in children. In extended observations of 14 preschool children, Daniels and Everson (16) observed that on a high-cereal diet the time consumed in eating was very much increased, a circumstance which they interpreted as indicating lack of appetite. They attributed the unfavorable action of cereals to the increased bulk of the diet and said that "since cereal foods are given liberally to children of preschool age it is believed that herein lies a partial explanation for the anorexia of this age group." In agreement with this are the observations of Bear (17). She found that children of India were easily satisfied with a very inadequate diet composed largely of cereal and other bulky foods. They did not at first enjoy a diet which was nutritionally greatly improved but which was reduced considerably in bulk. They appeared to miss the full, swollen feeling which followed their former manner of eating.

Techniques of feeding. It has been observed frequently that children who are feeding problems at home accept their food as a matter of course at nursery school. One of the main differences in the two situations is the impersonal attitude adopted at the nursery school. Such attitude has been demonstrated of great importance in the reaction of children to food. In the general problem of anorexia it is probable that psychological factors contribute more to the etiology than physiological ones. Attempts of worried mothers to make children's weights conform to the standards of charts may be the principal cause of anorexia. As stated by Low (18), it is a common trait of human nature to glory in attention; moreover, it is established that gastric contractions producing hunger are abolished in the presence of strong emotions. Low, accordingly, emphasizes the importance of allowing the natural appetite to have free play and the necessity of strict avoidance of forcing food.

Children are much more sensitive to color, texture, and manner of preparation of food than is commonly supposed. They notice the stringiness of beans, the slipperiness of asparagus, and the mealiness of new peas more than an adult.

Studies at Iowa State College (19, 20) have shown that children favor crisp textures such as are found in raw celery, toast, and carrot strips. On the other hand, menus of soft, "sloppy" foods such as scrambled eggs, escalloped tomatoes, mashed potatoes, are unpopular with children. The frequently advocated puréed vegetables are looked on with disfavor. Accented flavors are given preference; for example, cream of tomato soup is more popular than cream of pea soup. Although it is recommended that the food of children in general be bland, one decided flavor, such as that of tomatoes or bacon, may be desirable to make a meal more appetizing. Color in food also has its effect on children, who often rebel against an uninteresting plate. A bit of parsley wins their approval, and yellow arouses their enthusiasm.

Environmental factors. Although less well understood, season, temperature, barometric pressure, and prevailing winds may influence the appetite. McCay (21) has shown with preschool children that October

is the most "efficient" month for eating; that is, during this month they eat less food but eat it very promptly. After October the amount of food eaten increases, but the time of eating is also increased. In this particular study, little variation was shown with the hours of sunshine, but with northerly winds the children ate more. At the age of two and one-half years girls ate more promptly than boys, at three they were about equal in this respect, and at more than three years boys ate more promptly than girls.

Using rats as experimental animals, the influence of temperature has been studied in greater detail (22). The results of these investigations have shown that animals subjected to lower temperatures consume greater quantities of food. At temperatures of 84° and 73°F., rats consumed on the average 13 per cent and 31 per cent, respectively, more food than those maintained at 100°F.

A study of preschool children. Of 55 preschool children observed in an investigation made at Texas State College for Women (23), 28 had good and 14 had poor appetites. A comprehensive questionnaire supplemented by personal observations revealed the following descriptions of the children in the two groups divided according to their appetites.

The average milk consumption of the children with good appetites was little different from that of the children with poor appetites; the former drank two and six-tenths cups daily, while the latter drank two and four-tenths cups daily. However, it is of possible significance that two thirds of the children who drank two to three cups of milk daily had good appetites, while only one of ten children drinking less than two cups daily had a good appetite and only four of eleven who drank more than three cups had good appetites.

A striking difference was noted in the amount of sleep characteristic of the two groups. Children with good appetites generally secured the hours of sleep recommended for their ages; children with poor appetites usually had markedly less.

Poor appetites were notably prevalent among children from families containing one or two children and notably lacking among children from larger families. Very suggestive is the observation that the employment of mothers outside the home was more frequent among children with poor appetites than among those with good; it occurred in 50 per cent of the former and only 14 per cent of the latter. It was further observed that the less desirable emotional characteristics and behavior patterns were exhibited by children with poor appetites more frequently than by children with good appetites.

Summary. The complexity of factors influencing appetite is evident. There is apparently no innate mechanism upon which human beings can depend as a guide in choosing food. The natural stimulation to eat afforded by hunger is easily thwarted by nutritional, physiological, and psychological conditions. A diet well fortified with all the nutrients, but especially with vitamin B_1, and low in bulk is perhaps most advantageous to appetite. A program of health which includes an appropriate amount of sleep is also essential. The maintenance of an objective attitude toward food and well-regulated home conditions are of great importance in the acceptance of food.

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PREPARATION FOR HOME MANAGEMENT CONSULTATION WITH LOW-INCOME RURAL FAMILIES[1]

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IN THIS discussion no attempt is made to set up a curriculum to be followed by home economics students planning to work with low-income farm families, but rather to indicate some of the problems met, the type of information needed, and activities frequently engaged in, with the thought that these may be useful in determining desirable abilities, qualifications, and training.

At present home economists are working with low-income farm families through such public agencies as relief and mother's allowance services, public health organizations, extension service, vocational education, the Farm Security Administration, and through private and public loaning agencies. While each of these organizations aims to perform a somewhat different service in the community, they all desire to aid the farm family to get in a position where it can better help itself. It is not an easy job, but it is a challenging one!

The term "low-income farm family" will here be used as referring to a farm family that is having a difficult time producing an income sufficient to meet necessary farm operating expenses and obligations and provide for minimum necessary living expenses, and is requesting or needing help from a rural service agency, perhaps in the form of a loan, a grant, medical or health attention, farm or home management information. Only as assistance of some type is requested or needed, is the home economist called into consultation on home management problems of such families.

The home economist working with farm families has a double job. If she is to understand the problems of obtaining and using the farm income, she must understand and be able to work with practical rural home management problems; and she must also have a practical understanding and appreciation of the factors in successful farm management.

She must recognize that farming is often considered a business of low profits and that many factors may combine to affect the success of the farm family enterprise. Among these are: poor land; unwise use of land; too little land, livestock, and equipment to insure an economic unit; lack of managerial ability; insecurity of tenure; lack of or inadequate credit; burdensome debts; low prices for products and inflated land values; lack of marketing facilities; poor weather conditions; inadequate housing and equipment; poor health and sanitation; lack of family co-operation and understanding; educational limitations and opportunities; lack of opportunities or inability to use community and leisure activities.

The home economist should have a good picture of the rural situation where she is working. This picture should include such facts as: (1) total number of farms; (2) the number of owners and rents; (3) leasing terms; (4) the number of owned farms which are mortgaged and the number of or expected foreclosures; (5) the number of farm families having loans from various governmental and private agencies and the

[1] Presented before the social welfare and public health department, American Home Economics Association, Pittsburgh, June 29, 1938.

purposes for which these loans were made; (6) the number of farm families receiving some sort of assistance as grants or relief, old-age assistance, mother's allowance, etc.; (7) average farm incomes; (8) main sources of farm incomes; (9) location and type of services available to rural families; (10) location of county agents and home demonstration agents; (11) credit agencies available to and used by local farm families; (12) purposes for which families borrow money.

Such knowledge provides a background for actual consultation with families, but only that. Her real test is the success with which a worker can approach the family, learn and analyze their problems, and help in the solution. It is far more difficult to know how far she should go, what are the best techniques to use in developing the individual, and how the family's progress should be measured.

No matter what organization she represents, the home economist who works successfully with low-income farm families realizes that there are certain steps through which the family must proceed if it is to grow. One of the tests of such a worker is the number of families she has helped to develop to a point where they can meet and solve successfully their own problems. She differentiates between "doing for the family" and getting the family to desire and actually to do for themselves. She therefore plans

1. To help the family look back and determine why they are in their present situation
2. To help them make a plan to get from where they are to where they wish to go
3. To provide helps, stimulation, and guidance necessary in the successful execution of the plan
4. To help them to evaluate the success or failure of the plan and to analyze the factors involved
5. To direct the setting up of a new goal and a new plan based on past experience

In actual operation these steps are not clear-cut and separate; frequently it is only during the development of the family's plan that experiences and information on present and past living habits are obtained, and often it is necessary to provide practical help before sufficient confidence has been developed to reveal the past events which explain the present situation.

The worker will not only have to help the family develop a plan for its activity but she will also need to develop a very definite plan for her own work with the family. Her immediate objectives will in many cases be different from those of the family, although the ultimate goal will probably be the same. For example, the B's want to increase their income so that they can be self-supporting and have a reasonable degree of security. They examine their past year's expenditures and find that they have been spending a very large portion of their income for food. Their plan for the next year, therefore, is to grow a bigger and better garden; to preserve and store more vegetables; to produce, butcher, preserve, and store their own meat supply; and to increase the poultry flock. They also decide to adopt methods of production which will insure maximum output at minimum cost.

The worker will, of course, base her own plan on the one adopted by the family. Hers, however, will include a schedule of activities directed toward the acquisition by the family of necessary information and the development of skills, abilities, and attitudes which will make it possible for the family to carry on after the worker's assistance is no longer available. She will plan to bring to the family such stimuli, information, and methods of procedure as will result not only in an "ever normal cellar" and increased income but also in the members knowing how to make a year-round, well-balanced food plan, insure a better garden, safely preserve food, improve storage facilities, keep a record of food stored as a basis for next year's plan, evaluate the stored food from a monetary

and nutritive point of view, induce the children to eat and enjoy a well-balanced diet.

The home economist's plan will also include a time schedule showing when certain activities will be carried on and methods to be used for each. It will also state the results she expects to obtain by the end of a year and the number of contacts she expects will be necessary.

Before beginning the development of a home management plan, both the worker and the family must understand the situation which brought them together and the responsibilities which each is to assume in the coming relationship. The worker who immediately launches into a series of what to the family seem impertinent and prying questions, without having explained why such information is essential and the way in which it is to be used, has failed almost at once in "setting the stage." The development of understanding and co-operation should be one of the objectives of the first visit, even though they cannot always be obtained in so short a time. More time spent in simple and sane explanation and less in questioning on a first visit may be well repaid in the long run.

The husband, wife, and older children should all participate in building the family plan, for it is extremely important to have them consider it their plan and one which they can and will follow. It is desirable that it be a written plan. The skillful worker knows how to learn and evaluate the family's needs and resources, and she has at her command necessary short-cut devices and work sheets for bringing the facts together.

The value of such a procedure lies not entirely in the plan itself but also in its by-products—the attitudes, interests, and fields of thought opened up. It gives the worker a chance to gain information about the family's habits, abilities, and experiences that she might be months in obtaining otherwise. Much of her success depends on her skill in asking questions, using answers, and instilling confidence. A wholehearted interest and a genuine desire to help are essential at this point.

To become adjusted or readjusted to the economic and social problems confronting it, a family must have both the wish and the will to do so. Many times it is up to the worker to help the family see possibilities ahead and develop the "will to achieve." Years of frustrated effort take their toll in terms of reduced ambition and sometimes even lost hope. On the other hand, most families desire something—increased income, security, a car, a good herd, a better house, land ownership, ability to provide the necessities of life, or improved health. It is well for the worker to find out what this desire is and to build toward it if it seems worthy, in light of family needs. Or, if it is not worthy, she must help the family to change its goal; this may be a long-time objective for the worker, and the goal must be within the limits of possibility.

If the contact with the family was brought about through a social problem, its explanation or solution may be found in the economic situation, and vice versa. Social and economic problems of the rural family are closely interwoven; and while we seemingly work with one problem at a time, we must be able to see and consider the implications of all forces.

Developing the ability to analyze each situation and to decide where to begin is one of the worker's most difficult and most important tasks. To solve all problems at once is impossible. One thing is certain—she must begin where the family now is and build upon the abilities and resources which she finds. One small, pertinent, successful accomplishment will lead to many more.

Where the total income available for family living is low and uncertain, it may be necessary to do something about in-

creasing the size of the herd or the cultivated acreage, moving to another farm, or possibly developing a different type of enterprise which will insure a more regular source of income. This in turn may mean borrowing money from some loan agency, thus bringing new responsibilities and obligations to the family.

Two common problems with low-income farm families are those of food and housing. What information and abilities must the worker possess in planning with the family for the solution of the problem of inadequate food or poor nutrition? One of the first things she must do is to determine the specific family's food needs; this may mean planning for the infant, the growing child, the aged grandfather, and the person whom the doctor has put on a special diet. She must be able to translate these needs into terms which the family can understand. She must know what cash income is available for family living and what the farm does or can produce for home use. Her knowledge of food values, of the cost of food bought on the market and produced at home must be such that she can quickly and intelligently answer such questions as: If there is a lack of meat, what amount of eggs can be used for what amount of meat? If there are more dried beans and less meat available, what substitution can be made? Under what conditions is it wiser to purchase milk rather than produce it; to buy eggs rather than produce them; to buy canned tomatoes, buy tomatoes and can them, or grow and can them?

The knowledge that the consumption of three or four cups of milk a day and three or four eggs a week is conducive to good nutrition is of little value when the family sells all its milk to meet the necessary operating expense or the demands of an insistent loan agency; or when it cannot, because of lack of feed or information on feed and care, induce the hens to lay enough eggs for the family's needs. Thus, what started out as a simple problem may involve many phases of "family planning."

Housing and equipment problems are frequently difficult and call for considerable courage and farsightedness on the part of the worker. Lack of adequate sleeping space and equipment, lack of screens, fire hazards, lack of storage space, lack of pure water, and a poorly kept and equipped house are but a few of the conditions frequently met. They may be the result of low income, lack of training and initiative, poor land, poor tenant-landlord relationship, poor leases, and many other conditions.

Assume a situation where the house is inadequate in sleeping and storage space, lacks screens, and shows evidence of poor housekeeping. The worker must know the cause of such a condition before she can help create a situation where the family is no longer content to live in too few rooms and in insanitary and untidy surroundings and is challenged to change its environment. She will need to learn something of the family's income and, if they are renters, the terms of their lease and their relations with the landlord. She will want to know something of the early home life and health of the family, their educational opportunities, their recent disappointments, and their philosophy of living.

The solution of the problem may necessitate a plan for increasing the income so that cleaning materials, paint, oilcloth, and necessary equipment can be purchased. Perhaps the standards of the children can be changed through vocational classes in school or participation in a 4-H Club project. Perhaps the homemaker has lacked the stimulus which comes from association with other homemakers, and her attendance at community meetings or joining a homemakers' group should be encouraged. It may be necessary to consult the landlord as to what can be done about such things as improving the buildings or providing

screens; this gives an opportunity to explain to both tenant and landlord the mutual benefits in having each do his part in keeping buildings and surroundings in repair.

Helping in such a problem calls for information and abilities acquired in courses in psychology, family relationships, community relationships, family economics, housing, and home management. The problem is far too extensive to be solved by handing out a list of directions on how to keep the house clean or by advising the family concerning the number of sleeping rooms a family of seven should have. It requires judgment of the most practical type; and probably it cannot be solved in a day, a month, or perhaps even a year.

How often a worker will need to visit any given family varies from once or twice a year to monthly or even more frequent visits. A running record of contact with the family is essential. At reasonable intervals the home economist should measure the family's progress in terms of changed practices, attitudes, position in community, improved family relationships, increased income and net worth, improved food, and other living items. To do this, devices such as inventories, account books, and progress sheets are used.

At the end of the year the family council should be again called into session, the year's accomplishments evaluated, and the next year's plan developed—this time, it is to be hoped, with much less help from the worker. If the evidences of progress are in line with the goal set and if the family has learned to plan for itself, the worker can feel that she has succeeded in the first year's program. In any event, she should also evaluate her own accomplishment, make a new plan, and take the next step.

To summarize, the home economist who is to work with low-income farm families needs to know how to apply subject matter obtained in psychology, economics, sociology, and technical homemaking courses to everyday problems; how to translate technical terminology into understandable words and phrases; and how to distinguish between the important and unimportant. Above all, she must be able to start with each family where she finds it and build her program on the basis of the family's needs, abilities, and resources.

She should know something about family case work, office organization and procedure, record keeping, and measurement of progress, and about the common business transactions and responsibilities carried on by farmers, as well as about the services to be obtained from government agencies. She should know something of farm management as it affects farm family living. If possible, she should have opportunity to study case situations and do some carefully directed field work. A special methods course would prove a profitable addition to the pretraining of the home economist interested in home management consultation with low-income farm families, and it could include many of the things learned on the job by the present workers.

ART AND HOME ECONOMICS—A SYMPOSIUM

Because it deals with the selection and use of all kinds of everyday things, home economics offers a fine opportunity to stimulate an appreciation of beauty and the possibilities of obtaining and enjoying it in our homes and our personal belongings. Ways in which this is being done and helps for doing it are described in the following papers. They were assembled by the committee on related art of the textiles and clothing division of the American Home Economics Association of which Mrs. Dora W. Erway is chairman.

PUTTING ART PRINCIPLES INTO PRACTICE

MARTYE POINDEXTER

Courses in applied art at the Texas Technological College are planned, as in most colleges, around the particular needs of each individual. The students in this college are drawn mainly from farms, ranches, and small towns. They have had little or no training in design or color, and many of them enter the class in applied art with fear and trembling, declaring that they have no talent and no originality. On the other hand, they want to know more about the various subjects and are quite frank about their own problems. They are glad to discover that they can think of something creative to do and develop it from idea to actual article. Most of them are pleased and surprised to find that the relation between beauty and cost is not what they had always thought.

The objectives for these students, stated in concrete and specific rather than theoretical and general terms, are to stimulate art practices at once (not for a future, ideal home that does not get past the paper state); to use materials at hand and obtain from them interesting and beautiful results; to develop the creative urge in each so that she experiences the joy of accomplishing something that is her very own; to teach the use of excellence of design rather than cost as a basis of choice; to develop interest and appreciation for many things that one does not care to possess and that have no place among one's own belongings.

Before describing some of the ways by which these objectives are realized at Texas Technological College, it should be explained that the work in art is here organized as a separate department in the division of home economics and is recognized as one of the technical subjects for home economics majors, with a few more hours required than in most colleges. Because it is in this division, students are brought into closer contact with related electives and more of them take art electives than is usual.

To stimulate art practices immediately, such a problem is chosen, for example, as making a dormitory room more attractive with the use of very little money. The roommates decide on the amount each shall contribute and what the room needs, and then they go shopping to see what can be found. They report to the class, showing actual samples of curtains, bedspreads, or whatever is to be chosen. In one instance two girls bought materials for curtains at two windows, bedspreads for twin beds, and a cushion for each girl's chair for one dollar and a quarter a girl. The colors were chosen in relation to a few pieces of

pottery that the girls already owned. The curtains were made of a gay checked print at ten cents a yard; the bedspreads were unbleached muslin at eight cents, finished with wine-colored bias binding and repeating two of the colors in the curtains; the cushions were of medium blue jaspé, the third color in the curtains. The same furnishings would have been quite attractive in many small cottages.

The study of pictures is begun by talking about how to make better use of the student's own pictures. In other words, every problem begins with what one has and how it is being used. Girls do not seem to resent this type of approach which is much more specific than when a subject is discussed in an impersonal way from the standpoint of principles involved and the student is left to make her own application. One project this year is the choosing and framing of a number of good colored reproductions of pictures which are rented to students for twenty-five or fifty cents a semester. Among the pictures are some that will appeal to boys.

Unusual uses of material at hand are stressed rather than sending away for unusual material. Of course, the latter is enjoyed when it happens along, but the former offers a more difficult and often more exciting problem. In studying flower arrangements, for instance, each student practices on different materials which she obtains at home, on the campus, or between her home and the campus—in other words, not bought. Many bring in the most unlikely material to see if it actually has any possibilities. The results are frequently a pleasant surprise. The foods department is often called on for containers, such as pitchers, sugar bowls, mixing bowls, bread pans.

Of course, the creative element always comes somewhat into play even if a student is merely assembling and arranging objects, but problems are also given in which it is the important factor. For example, in the beginning class in design, surface patterns are created that later may be used on portfolio covers. Tied-and-dyed patterns are one of the most productive in original thought. In the costume design class, belts, ties, and fastenings are made from such things as washers, hinges, plumbers' chains, curtain rings, with most exciting results; and as each girl is required to finish and model her creation, she really finds out whether her ideas are good or not.

In teaching students to base choice on excellence of design rather than on cost, exhibits are shown of articles that have beautiful lines, form, and color but cost not more than a dollar. There are also comparable exhibits of articles sold at the same price, but with one having good and another poor design; questions on an accompanying card are planned to make the student think why one is better than the other. These articles may be pictures, handkerchiefs, pieces of material, drinking glasses, flower vases, and are usually purchasable at local stores. Since many of the students' families buy from mail-order houses, the girls also study the designs of furniture, tableware, and other household equipment which these firms supply.

In trying to realize the last objective, namely, the development of appreciation of beauty in things which one does not own or use, all exhibits that come to the campus or to stores in town are utilized; the department sponsors a certain number each year; and the annual Home Economics Club sale brings many things in the way of linens, pottery, metal, and glass. The attempt is made to see that the students become acquainted with all these things, even though they buy very few. Many visit such places as museums, art galleries, or potteries during the summer vacation—something they say they would never have thought of doing if their interest had not been aroused in this way.

RELATED ART AND THE FUTURE HOMEMAKERS OF TEXAS

NELL E. DEARMONT

Related art formed the basis of two exhibits at the 20th annual meeting of the Future Homemakers of Texas early in May 1938. Approximately seventeen hundred high school girls and 300 teachers attended the meeting, which is sponsored by the homemaking division of the State Board for Vocational Education. Originally this rally was known as "The Girls' Clothing Contest," and 49 girls attended the first one, held in Austin in 1919. It was exactly what the name implies—a clothing contest; however, in later years other equally important phases of homemaking were added to the state contest and the name was changed to "The Homemaking Education Rally." In 1938 the major portion of the program included even more special than general meetings.

"Planning Artistic and Comfortable Housing for the Family" and "Making Our Homes More Livable" were two exhibits, in the judging of which the girls applied their knowledge of related art.

The exhibit "Planning Artistic and Comfortable Housing for the Family" included three living rooms set up on one side of a longer room. Each room was set up by a committee made up of three members from the staff of the State Board and colleges. The furniture used was donated by local furniture stores.

In Room No. I, there was large overstuffed furniture improperly placed. The room was uninteresting, colorless, and unbalanced. Provision was made for some family activities, but none for special interests of children. The furniture for this room was the most expensive of any used in the three rooms.

Room No. II, an attractive, well-arranged room, was furnished in maple with color accents. The needs of every member of the family were considered in the selection of the furniture, and good lighting was provided for all. Provision was made for games, reading, and radio; for hobbies such as stamp collecting and knitting; for religious interests, by a Bible and Sunday school pamphlets; for international interests, by newspapers and magazines; for finances, by a budget book and penny bank; for social activities, by chairs grouped for conversation and a game center; for education, by books and dictionary; for beauty, by flowers, books, and magazines.

Room No. III was a formal room in which all the principles of good design were carried out. The furniture was more expensive than in Room No. II. Individual interests were considered to some extent, but no provision was made for interests of the family as a whole.

The problem set in connection with this exhibit was based on a high school course, Homemaking III, and it was presented to the girls as follows:

> The Randall family consists of the father, mother, Judy (age 15), Robert (age 12), and Betty (age 7). The father is a laborer and is regularly employed. He is the only member to contribute to the family income. They live in a town of about 1,000 population where the social opportunities are rather limited. The family spends very little on entertainment outside the home. The mother spends her time as a homemaker. The family discusses finances and other problems and joins in some social activities. Judy is an active and sociable person and has time for some leisure activities.
>
> Three living rooms have been set up. Study them and select the one which you think shows good selection and arrangement of furnishings and meets the needs and interests of the family, giving the reasons for your choice.

The majority of the girls made the correct selection for this particular family in choosing Room II, and some of them gave excellent reasons for their choices. The results showed that the girls recognized the provisions made for individual and group

interests, had an understanding of family relationships, and knew values of furniture and furnishings, besides having some understanding of related art.

The exhibit "Making Our Homes More Livable" pertained to a girl's room and was based on the course Homemaking I. There were three dressing tables and three study centers set up. On each dressing table there was a different arrangement of flowers. The problem presented to the girls was:

> Marion Smith, 15-year-old high school girl, lives in a Texas town of about 3,000 population. Her father is a laborer with a small income. Marion is an only daughter and does not have to share her dressing table or study center. If you were Marion which of the three dressing table and study arrangements would you choose?

In choosing the dressing table, the girls were asked to consider arrangement and suitability of the table and the effectiveness of the flower arrangement. In the study center, they were to consider two points: how far the arrangement was conducive to study and the unity of the entire grouping. Here again the results showed that the girls were familiar with art principles. Also they seemed to like orderliness and simplicity as well as convenient arrangements.

A HOMEMAKER SPEAKS

MARGUERITE TRAUGER TRUE

It has been said that the prime function of an education is to fit one for life. I know of no other training which could have fitted me better for my role in life than that which I received in home economics. As a homemaker and a mother, I have found this training especially helpful; and were I to have followed a professional career, I can see where it would have made it possible for me to avail myself of many opportunities.

Although I have incorporated many school lessons into daily living, I think that during the first years of my married life the most useful ones were those I received in household art. First of all, I found that the principles of good design can be applied to almost all household duties, not only to furnishing a room but also to cleaning, dishwashing, laundering, and setting a table; for my household art teacher thoroughly impressed me with the fact that order is the first law of good design. I soon realized that order—or neatness and planning—simplifies housekeeping and makes it more enjoyable. Then, too, the principle of balance can be applied to daily life as well as to interior decorating. Too much social life, too little real work, too much speed, no relaxation, all tend to make us unbalanced, with the result that sooner or later we find our work left undone or our systems so upset that we are susceptible to colds and diseases.

When furnishing our apartment, I was glad to recall from my college lectures these words, "Buy your furniture slowly, but buy well-built, sturdy pieces that will not only fit your present needs but will also be usable in your next home." This advice kept me from buying foolish knickknacks which would have been discarded later, and also reminded me to plan for future living quarters. I was even more grateful for this advice when later we moved to a rented house and saw how beautifully our furniture fitted.

While living in this house, we began to plan one of our own. Never before had I realized how many things go into the building of a house and how important are the decisions that must be made.

Simplicity is one of the keynotes of good design. And we fought to keep things simple, with the architect and the builder and with the men who sold us our linoleum, our light fixtures, and our furniture. No window moldings, no doorframes, no fancy chandeliers, no queer-shaped furniture for

our house! It was hard to make them understand this, but after they saw the lovely effect of the finished house, they not only admitted that it was good-looking but also recommended these suggestions to other customers.

Because I was busy at the time we were building, I felt that a professional decorator might simplify the decorating job and also insure its success. So I took the house plans to a well-recommended decorator. I was soon convinced that we had better do the job ourselves if we wanted the house to express "us"; for not only had the decorator made the living room look like a furniture store but she had also suggested faddish colors which we disliked. The idea of an orange dining room with silver ceiling and pistachio-colored rug made me sure I would want to eat all of my meals out.

So we started in to furnish our home ourselves. It really was furnishing, too, not decorating; for we selected simple, useful pieces of furniture, good materials, and didn't "decorate" a thing. When we realized that we had to furnish ten rooms, we were glad again to remember the advice about buying furniture slowly. By taking time to think our problems through, we often found that we could remodel some piece of furniture we had inherited or some bookcase or table so that it was more suitable than any we might buy. We began to plan our furnishings around the things we had, and we soon arrived at the result we wanted with remarkably few mistakes.

I think that one other important guide to furnishing was the suggestion that not all expensive things are of good design and not all things of good design are expensive. We found, for instance, that a simple, rough-weave mat may be much more beautiful on a nicely finished end table than a costly brocaded satin or damask scarf.

And so you can see how many ways training in home economics can help a housewife to plan her day, her home, and her life. I wish that every girl might be fortunate enough to have this training!

"MORE BEAUTIFUL EVERYDAY THINGS" IN SWEDEN

MARY ELIZABETH STARR

That happily chosen theme for the Homes Exposition in Stockholm in 1917, "More Beautiful Everyday Things," has had a far-reaching effect. Even now we can see on every hand the effects of its triple appeal—to the manufacturer, the artist, and the buying public. This is a result of conscious effort on the part of the Swedish Society of Arts and Crafts founded in 1845.

The movement has, however, a more fundamental basis. The Scandinavians are blessed with joy in participation and pride in accomplishment. Their far northern position has given them long evenings, devoted in the summer to such simple amusements as group singing and dancing, and in the winter to family gatherings around the spotless, whitewashed corner fireplace where each member of the family can engage in some handwork more or less of his own choosing.

Doubtless, the most important word of those four is "everyday." In Sweden one does not necessarily find more beautiful things than are produced elsewhere, but one does find an abundance of beautiful things produced at prices that permit the person of average income to own them. This undoubtedly has a direct connection with the fact that in Sweden there do not exist the extremes of wealth and poverty found in many other parts of the world. There are few enormously wealthy men and very few unemployed. More influential even than this, however, is the public demand for "more beautiful everyday things."

In Sweden, handicraft did not cease when machine production began, but the two have really continued side by side. The guild system, with its high standards of workmanship, was still in operation until the middle of the 19th century. Twenty-five or thirty years later, all Sweden came to know a man named Arthur Hazelius, whose burning desire was to save for future generations beautiful examples of "slojd" which he felt were fast disappearing. He founded the Northern Museum in Stockholm, and much that is to be seen there he gathered as he traveled all over Sweden. He was without funds to buy or authority to collect, but the countrypeople gave him their choicest articles. No one today can question his wisdom or fail to admire his persistence. The Northern Museum and its outdoor branch and neighbor, Skansen, have become models for similar displays in many other countries.

There are in Sweden three important organizations responsible for much of the beautiful modern weaving, and their work has a sound economic as well as a fine aesthetic basis. The first was founded in 1874 with the delightful name, "The Friends of Handicraft." It designed and produced many of the carpets, draperies, and furniture coverings in the well-known Stockholm Town Hall. In 1899, the Swedish Homecraft Association was formed under the sponsorship of the King's brother, Prince Eugen. It engages artists whose designs are given to the weavers throughout the country for execution, thus insuring good workmanship and giving, at the same time, many peasant women a means of supplementing their incomes. There are also local homecraft organizations. In 1912 they banded together under the sponsorship of the late Queen and became known as the National Association of Swedish Slojd Societies. There are more than thirty of these local groups, with headquarters and a central salesroom in Stockholm. Most of the local societies sponsor schools for handicraft under the guidance of an artist-director. Apparently these three organizations all receive some financial assistance from the government for their educational work although the amount is not great. A number of private firms have aided materially in building up Sweden's reputation in this field. Foremost among them is Elsa Gullberg, who produces both handmade and machine-made textiles.

There are some who feel that the beautiful modern textiles now being produced in Sweden have wandered far from traditional paths, but there are many more who say instead that the modern Swedish products have transcended the geographical boundaries of Sweden, becoming international in character and very definitely a product of the 20th century.

In Swedish shops the products of industrial art and handicraft are displayed side by side and compete on a basis of merit rather than sentimentality. The difference between them is a difference in method of merchandising rather than a difference in beauty or skill of workmanship. It has been fitly pointed out that there should really be no disagreement between folk art and modern industrial art inasmuch as both serve fundamentally the same purpose: the beautifying of articles of everyday use.

AMONG BOOKS AND MAGAZINES OF 1938

DORA W. ERWAY

Not many books or articles are devoted wholly or primarily to art in relation to home economics, though many do contain facts, ideas, and suggestions very valuable in this connection. It is not easy to tell from an announcement or index which ones these are, and they are so widely scattered that a complete bibliography might be more difficult to compile than its

use would warrant. It is also difficult to classify such material rigidly because the exact purpose it will best serve will depend somewhat on the user. For example, a book on garden design might be valuable either in connection with design in general, house design, or home beautification. Despite these difficulties, however, it may be worth while to list a few 1938 publications which the present writer happens to have seen and found helpful.

ART AND DESIGN

Composition. By ARTHUR WESLEY DOW. Garden City, N. Y.: Doubleday, Doran & Co., Inc., $3.50.
Revised and enlarged.

Designed Books. By MERLE ARMITAGE. New York: E. Weyhe & Co., 794 Lexington Ave., $3.
Photographs of 23 books designed by Merle Armitage.

The Power of Color. By MARK SEXSON. Boston: Christopher Publishing House, $2.
A philosophy of life based on color.

The Way of Ships. By EDMUND VALE. New York: Charles Scribner's Sons, $2.
A history of ship design. A volume in the Design Life Series.

CLOTHING AND TEXTILES

Beauty Plus—. By MARY MACFAYDEN. New York: Emerson Books, Inc., $1.96.

The Clothing of the Ancient Romans. By LILLIAN M. WILSON. Baltimore: Johns Hopkins Press, $5.
A new volume in the Johns Hopkins University Studies, Archaeology.

Cocoon Silk. By C. H. C. CARSDALE. New York: Pitman Publishing Corp., $4.
A technical manual for those interested in the silk industry and for textile students.

The Costume Book for Parties and Plays. By JOSEPH LEEMING. New York: Frederick A. Stokes Co., $2.50.
Descriptions and instructions for making costumes; illustrations by Hilda Richman.

Designing Women. By MARGARET BYERS with CONSUELO KAMHOLZ. Garden City, N. Y.: Doubleday, Doran & Co., Inc., $1.96.
The art, technique, and cost of being beautiful.

Dressing the Part. By MRS. FAIRFAX PROUDFIT WALKUP. New York: F. S. Crofts & Co., $5.
An 8-volume history of costume for the theater.

Hoop Skirts to Nudity. By CARY A. HALL. Caldwell, Idaho: Caxton Printers, Ltd., $5.

How the Fashion World Works. New York: Harper & Brothers, $2.50.
Lectures given at training courses conducted by the Fashion Group, Inc. Authors include the editor of *Vogue*, a Macy stylist, and a department store manager.

Look Your Best. By LAURENE HEMPSTEAD. New York: Prentice-Hall, Inc., $3.

Modern Clothing. By LAURA BAXTER and ALPHA LATZKE. Chicago: J. B. Lippincott Co., $1.68.

The Romance of Textiles. By ETHEL LEWIS. New York: Macmillan Co., $4.

CRAFTS

Block Printing Craft. By RAYMOND W. PERRY. Peoria, Ill.: Manual Arts Press, $3.50.
A short history.

Book Making in the South. By W. T. COUCH. Chapel Hill, N. C.: University of North Carolina Press, free.
Pamphlet-reprint from Calaphon, Annual of Bookmaking.

Colour Woodcuts: A Book of Reproductions and a Handbook of Method. By JOHN PLATT. New York: Pitman Publishing Corp., $1.75.

Dolls to Make for Fun and Profit. By EDITH FLACK ACKLEY. New York: Frederick A. Stokes Co., $2.

Handicrafts of the Southern Highlands. By ALLEN EATON. New York: Russell Sage Foundation, $3.
An account of the rural handicraft movement with beautiful illustrations from photographs by Doris Ulmann.

Holiday Handicraft. By NINA R. JORDAN. New York: Harcourt, Brace & Co., Inc., $2.

Indian and Camp Handicraft. By WALTER B. HUNT. Milwaukee: Bruce Publishing Co., $2.

The Student's Book of Etching. By IAN STRONG. New York: Pitman Publishing Corp., $1.75.

The Student's Book of Wood-Engraving. By IAIN MACNAB. New York: Pitman Publishing Corp., $1.75.

GARDENING

Gardening as a Hobby. By ALLEN W. EDMINSTER. New York: Harper & Brothers, $2.50.

THE HOUSE AND ITS FURNISHINGS

American Village. By E. V. MITCHELL. New York: Stackpole Sons, $3.

Contains illustrations of glassware, silver, furniture, pewter, homespun products, from the Henry Ford Collection in Greenfield Village, Michigan.

Collecting Antiques for the Home. By HENRY H. SAYLOR. New York: Robert M. McBride & Co., $3.

For homemakers, not collectors.

Creative Flower Arrangement. By DOROTHY BIDDLE and DOROTHEA BLOM. Garden City, N. Y.: Doubleday, Doran & Co., Inc., $2.

Discussion of the principles of flower arrangement.

Let's Set the Table. By ELIZABETH LOUNSBERY. New York: Funk & Wagnalls, $2.50.

Old Silver and Old Sheffield Plate. By H. P. OKIE. Garden City, N. Y.: Doubleday, Doran & Co., Inc., $3.50.

Plan Your House to Suit Yourself. By TYLER STEWART ROGERS. New York: Charles Scribner's Sons, $3.50.

Planning Your Home. By EMANUEL E. ERICSON and ROY L. SOULES. Peoria, Ill.: Manual Arts Press, $2.

Discussed from the architectural standpoint, taking into account use of room and furniture.

Space for Living: Creative Interior Decoration and Design. By PAUL T. FRANKL. Garden City, N. Y.: Doubleday, Doran & Co., Inc., $3.50.

Successful Home Furnishing. By THELMA M. BURROWS. Peoria, Ill.: Manual Arts Press, $2.75.

Guidebook of style, balance, color, and design in American homes.

Where We Live. By JAMES CLYDE SEALE. Nashville, Tenn.: James Clyde Seale, $2.50.

Advice on domestic architecture and plans.

TOYS AND PLAYS

Shadow Plays and How to Produce Them. By WINIFRED H. MILLS and LOUISE M. DUNN. Garden City, N. Y.: Doubleday, Doran & Co., Inc., $2.

The Wise Choice of Toys. By ETHEL KAWIN. Second edition. Chicago: University of Chicago Press, $1.50.

Helpful material crops up in all kinds of magazines. Among those likely to be worth looking through are perhaps the following:

Antiques, 40 East 49th Street, New York City, monthly, $5 a year.

Contains general information.

Art Digest, 116 East 59th Street, New York City, semimonthly, $3 a year.

More about the fine than the applied arts.

Art Instruction, 330 West 42d Street, New York City, monthly, $3 a year.

Carries occasional articles on crafts.

Design, 20 South 3d Street, Columbus, Ohio, monthly, $3 a year.

Handweaving News, Nellie Sargent Johnson, 12489 Mendota Avenue, Detroit, Michigan, monthly, $3 a year.

A monthly leaflet on weaving intended for all who use or teach the use of hand looms.

Magazine of Art, American Federation of Arts, Barr Building, Washington, D. C., monthly, $5 a year (including membership in the Federation).

Gives news of important exhibits; tends toward the fine arts.

Puppetry Bulletin, 1938-1939, Paul McPharlin, Birmingham, Michigan, pp. 65–86, 6 cents to cover postage.

"A guide for puppet workers and fanciers, to supplies, equipment, companies, performances and books."

School Arts Magazine, The Davis Press, Worchester, Massachusetts, monthly, $3 a year.

Intended primarily for grade and high school students but occasionally good for more advanced classes.

The Weaver, Emil Banat and Sons, Jamaica Plain, Massachusetts, quarterly, $1 a year.

SIGNS OF THE TIMES

TEXAS HOME DEMONSTRATION WORK

MILDRED HORTON

Texas enjoys not merely the distinction of being the largest state in the Union but also that of having more than the usual four corners to its boundary. However, when you come to Texas in June to the meeting of the American Home Economics Association, whether you enter by way of Dallam or Lipscomb County, the two most northern Panhandle points, or by El Paso on the west, Cameron on the south, Jefferson on the southeast, Bowie on the northeast, there will be a county home demonstration agent of the Texas Extension Service to welcome you.

Nearly all of Texas's 501,017 farm and ranch families are being served in some way by the Cooperative Extension Service in Agriculture and Home Economics of the Texas Agricultural and Mechanical College. There are in the state 254 counties, 181 of which now have county home demonstration agents, 22 of them with assistants—a total of 203 agents. There are 287 county agricultural agents and assistants giving agricultural information to Texas farmers of every county.

The administrative group for this field force has headquarters at the A. & M. College, College Station. You will find College Station in Brazos County, 150 miles north of Galveston, about 200 miles south of Dallas, 175 miles from the Louisiana border, and 600 miles east of El Paso.

Home demonstration work in Texas, as in other states, has for its purpose the giving of a special type of training in those things which pertain directly to the conduct of the home and to the enrichment of the individual, the family, and the community life in rural Texas. The basis of this work is home economics. It begins in the home and at whatever point of development the woman or girl may be, moving forward as she is willing to go and as her needs are revealed.

The method used is different from that used in some of the other states. The essential point in the Texas plan for carrying on home demonstration work in the counties is the development of demonstrations by the farm people themselves.

Dr. Seaman A. Knapp, the founder of demonstration work, defined the demonstration as a progressive, practical example of better farming or homemaking by a farmer or his family on the farm and in the home, which leads on to greater profit, comfort, culture, influence, and power.

In order to reach a greater number, the rural women of Texas are organized into 2,036 home demonstration clubs with 38,136 members; the girls into 1,767 clubs with 30,174 members. These club members during 1938 helped about 100,000 other farm and ranch families to attain better living; as when the pebble is thrown in the water, the circle grows larger and larger and the extent of the "passing on and helping" is never fully known.

In each club one demonstrator is chosen for each of the two long-time demonstrations which are usually conducted in a county. Since there is still a great need for gardens, orchards, dairy cows, chickens, and meat animals for home use in many rural Texas homes, in nearly every county there is a demonstration in some phase of the home food supply. The demonstrator

is a person who develops in her home one of these long-time demonstrations of better farming or homemaking, following principles recommended by the Extension Service, for the purpose of meeting the needs and interests of her family and of proving to her neighbors the value of the demonstration. As the demonstration develops, club members, friends, and neighbors are invited in to see the accomplishments, the changes brought about by the demonstration; to receive information; to receive inspiration to go home and do as well or better.

Women and girls consider it a privilege, an honor, and a responsibility to be a demonstrator. They consider it a privilege because it enables them to work directly with their neighbors and the county home demonstration agents in making improvements of permanence and value in their homes. It is an honor because it shows that their neighbors have confidence in them and are willing to learn from them. It is a responsibility because of the agent's faith in the ability of the demonstrator, because of the perseverance and energy required, and because of the influence that the demonstration will have on the community.

The neighbors and other club members are inspired to emulate the demonstrator's success when they visit her home on the annual Achievement Day and see the results of her year's efforts. Thus the demonstrator becomes a teacher, and the work of the home demonstration agent is multiplied many times. At such achievement meetings, the truth of Dr. Knapp's statement that "The crop grew fast, but the man grew faster than the crop" is evident on all sides. That the work is bringing to the family a fullness of living as individuals, homemakers, and citizens, cannot be doubted.

In each county having a county home demonstration agent, there is a County Home Demonstration Council made up of representatives from the various rural women's clubs served by home demonstration work. These county councils serve as demonstrations in organization, and the agent has the same relation to this demonstration as she has to the subject matter demonstrations. The council trains the clubs in good organization procedure and is responsible for all activities in the county related to home demonstration work which do not require specialized training. Through these councils the extension work for the women and girls for each county is planned. Joint meetings with the County Agricultural Councils are planned to take care of all matters of interest to both the men and women.

Besides the women's and girls' clubs there are special groups which are affiliated with the councils, such as recreation, marketing, and reporters' associations, and even a photographers' association.

Again let us remind you that visitors coming to Texas to attend the American Home Economics Association meetings will be given a hearty welcome by the Texas Extension Service. It will be a pleasure to show you farm and home demonstrations on Texas farms and ranches.

FARM SECURITY ADMINISTRATION WORK IN TEXAS

MATTIE A. TRICKEY

The Farm Security Administration program in Texas serves 197 of the 243 counties in the state, with 141 home management and assistant home management supervisors and 189 farm management and assistant farm management supervisors. Both the regional office, which serves Texas and Oklahoma, and the state office for Texas are located in Dallas, Texas.

The program has the two following main channels of approach to improving standards of living of low-income farm families: (1) developing balanced farm and home plans whereby families may produce on the

farm as nearly as possible all the food needed by the family, based on acceptable nutritional standards, adequate feed for livestock, and varied cash crops; and (2) lending money from the U. S. Treasury to worthy farm families who cannot borrow from other sources and whose plans are economically sound to make possible the execution of the farm and home management plans. Such plans are made prior to the cropping season, while throughout the year leadership is given by the county farm and home management supervisors, who work together with the farmer and his wife to insure the successful execution of their plans.

MIDYEAR MEETING OF HOME ECONOMISTS IN BUSINESS

EDITH M. BARBER

The second annual midyear meeting of the home economics in business department was held on January 13 and 14 in New York City at the Hotel Pennsylvania. There was a registration of 42 from outside of New York, including Chicago, St. Louis, Boston, Philadelphia, Washington, Cleveland, Cincinnati, Buffalo and Corning (New York), New Kensington (Pennsylvania), Wheeling (West Virginia), Battle Creek (Michigan), and North Canton (Ohio). There were also over 80 registrations from New York. After registering for the afternoon conference sections, the group was welcomed by Isabel Young, national chairman. Edith Barber, New York chairman, introduced the speaker, Charles Wesley Dunn, general counsel for the Association of Grocery Manufacturers of America, who discussed the provisions of the new food laws.

The president of the American Home Economics Association, Dr. Helen Judy Bond, addressed the group at the luncheon, taking as her subject "Inventory and Resolutions." In the afternoon there were group discussions: that on clothing and textiles was led by Caroline Hutchins of Simplicity Patterns; equipment, Helen Ridley of *Good Housekeeping*; food and nutrition, Eleanor Ahern of Procter & Gamble; and outlines of study of buying habits, Mary Barber of the Kellogg Company. After the close of the meeting, the group was entertained at a cocktail party at the Glass Kitchen, with Margaret Sawyer as hostess.

At the Saturday morning meeting, Esther Latzke, chairman of the Chicago section, presided. Résumés of the Friday discussions were given by the leaders, after which there was a general business meeting. The sessions closed with a buffet luncheon. Both luncheons were planned by a member, Marie Casteen of the Hotel Pennsylvania, and offered food novelties of particular interest to this group.

WHAT WE LEARN FROM SERVICEABILITY STUDIES[1]

MARGARET B. HAYS

We are all interested in the amount of use we will get from a given article, whether it be a pocket handkerchief or a fur coat. We can compare the relative values of new materials by analyzing them in the laboratory, and sometimes this type of testing is by mistake called a wear study. Or a few purchasing agents for institutions may secure samples and have them laundered time and time again and use a comparison between the washed and unwashed materials to aid in selection. However, neither of these methods can predict just how long we will be able to use the particular towel or napkin. I shall use the term "serviceability study" to indicate one in which the material is subjected to normal use—one

[1] Presented before the textiles and clothing division, American Home Economics Association, Pittsburgh, June 29, 1938.

in which sheets are used as sheets or dish towels as dish towels.

The service studies here described were selected because we know just how the materials were made. They begin with a bale of cotton or a fleece off the sheep's back and follow the raw fibers through the manufacturing operations up to the completed article.

The earliest study of this last kind of which I know is the silk petticoat test. Some readers are undoubtedly familiar with this pioneer work started by the standardization committee of the American Home Economics Association in 1920, and perhaps some of them even wore a pure-dye or a weighted taffeta petticoat for the sake of science. They will recall that 800 skirts made from 3 grades of taffeta and 3 of messaline were sold to and worn by members of the Association. The worn-out petticoats and a report of the amount of wear each received were sent to the committee. From these discarded skirts it was found that differences in the wear given by the various individuals and in the garment style were as important as the differences in the number of ends and picks and amount of weighting in materials.

This lack of uniformity in how we wear out our things is a problem that is met by everyone working on the serviceability of fabrics. At the Bureau of Home Economics, we try to solve the dilemma by conducting investigations in institutions. Sheets, for example, are used on beds for transient guests in a hotel. By the time a sheet of middling cotton has been used 100 nights with laundering after each use, we assume it has had a fussy sleeper just as many nights as has a sheet from strict good ordinary cotton that also has been used and laundered 100 times. By studies like these we can compare the effect of a variable such as the grade of cotton or the fabric construction on the durability of sheeting.

We cannot change clothing from one person to another, so we have many people wear the same kind at the same time. At present we have a squad of 26 girls and 36 boys in an institution who alternately wear a cotton and a rayon garment. The girls' vests and the boys' union suits were knit in commercially accepted styles. Then, at regular periods, we test a rayon and cotton garment that has been worn by the same person. The values for 3 boys and 3 girls are averaged to show the relative merits of cotton and rayon.

Institutions also permit larger sample lots than are feasible in home use. We know that we need a large number of samples, but just how large we can't say. However, it must be big enough to average out the differences in personal wear that we have already discussed, to average out variation from one sample to another, and to care for the loss that occurs in actual service, as well as for accidents.

Our blanket and sheet studies illustrate the variations in the amount of service given by individual samples. In one lot of blankets, all of which were made from the same material, one wore out after 28 washes while another lasted 36. The whole lot of blankets averaged 31 launderings. Similarly, sheets ranged from 222 to 251 periods of service with an average of 237.

In certain studies we need to make a generous allowance for lost samples. We have lost relatively few sheets or blankets, but the underwear story is quite different. There the losses are from 25 to 35 per cent. The percentage was much higher in a co-operative study made by the National Bureau of Standards and the Post Office Department. They wanted to compare the durability of ordinary cotton duck and duck made from Pima cotton, so 200 mail pouches of each material were put into service. At the end of one year, 33 of the ordinary duck and only 10 of the Pima duck were recovered.

Also provision must be made for accidents such as stains that require drastic

treatment to remove, or having a blanket get into the sterilizer. Our little friends sometimes punch holes in a vest to tie in a strap, instead of fastening by the more conventional sewing method, and other strange things happen that we are at a loss to explain.

The number of articles needed in a test varies with the kind. The initial serviceability test with sheets was made on 3 lots of 30 sheets each, but we doubled the number of samples in the next one. We try to have at least 30 blankets in a lot, and a minimum of 100 vests or union suits. These are not hard and fast rules, because when experimental material is made up, the number of articles obtained is not always the same. For example, when we expect 30 blankets, we may get from 27 to 32.

Good co-operation is vital for any service study. Since the method of laundering and amount of use between washings are important, we need a laundry supervisor to see that the new washman doesn't add bleach, and a matron to watch that Tom or Susie change to clean underwear on the right day. This co-operation is hard to obtain because institutional personnel changes frequently and even the management may shift to an entirely new group right in the middle of a study. Many of these people do not even care to understand the problem. We have found that no project is feasible unless we can obtain our records and keep track of our samples by the institution's own system of handling articles, or by making only minor changes. The nurse wants a blanket for her patient, but she won't write down that she put it on the bed at 8:15. If we ask that, the test blankets go on a shelf and are conveniently forgotten.

A service study can well be considered as a method of testing textiles. Thus, when we have a large sample, similar wear, and the same laundry method, we can compare the effect of other variables such as fiber quality or fabric construction on the durability of the material. For example, when the grade of cotton varied, we reported 239 times laundered as the average length of service for middling grade of cotton. We have just completed another study on a somewhat heavier sheeting used under the same conditions in the hotel, in which we found that these heavier sheetings made from middling cotton of the same staple length averaged 278 instead of 239 washings.

A rayon slip study recently started by a subcommittee of the American Society for Testing Materials is of interest. Rayon materials of various yarn counts and amounts of loading, ones that show definite differences by laboratory analyses, have been made into slips to learn what these differences mean to the consumer in terms of amount of service. Each of the 400 women co-operating wear slips made from 3 different materials. This subcommittee is particularly interested in service studies as a testing technique, and its aim is to describe the test method and size of sample that is necessary.

From service studies on materials of known history, such as the sheets, blankets, and knitwear we have been discussing, we know that a guarantee of service is meaningless unless the conditions of use and laundering are rigidly specified and tolerances for sample differences are given. We have learned that deterioration is progressive and that a specific difference in fiber quality or fabric construction—all other factors being equal—is reflected in the durability of the material. This kind of information can serve as a basis for the manufacture of more serviceable textiles. Although serviceability studies require years to complete, they are indispensable to textile research because no laboratory test or combination of tests now exists that simulates the conditions of normal use.

EDITORIAL

THE NEELY BILL

Senator Matthew M. Neely of West Virginia reintroduced his bill to abolish compulsory block booking and blind selling of motion pictures on the opening day of the 76th Congress. This new Neely bill (S. 280) has been referred to the Senate Committee on Interstate Commerce, of which Senator Burton K. Wheeler of Montana is chairman. Senator Neely plans to push its enactment at once.

An editorial on page 39 of the January JOURNAL told that this was expected and that the American Home Economics Association expected to give active support to the new bill. The legislative committee accordingly urged all state home economics associations to get into touch with their congressmen urging prompt and favorable action on the bill, and also to give the whole question wide state and local publicity.

The two chief arguments for the bill were thus summarized in a release from the Motion Picture Research Council:

> Complaints by discerning parents about the poor quality of pictures shown at children's matinees in neighborhood theaters are increasing in number and vigor. The best way to correct this evil is to secure the passage of the Neely Bill.
>
> Consumers are becoming more conscious of the "pig in a poke" choices of pictures to which the present situation forces them. They are also more conscious of the unregulated, un-American monopoly which has given rise to the situation. To them, too, the Neely Bill offers the freedom of choice to which they believe themselves entitled in a democracy.

Further information and suggestions may be obtained from the Motion Picture Research Council, 1201 Sixteenth Street, N. W., Washington, D. C.

CHILD LABOR LEGISLATION, 1939

The Wages and Hours Act removes many child workers from industries engaged in interstate commerce, but unfortunately not all of them are covered by its provisions. This is clearly brought out in the recent annual report of the National Child Labor Committee. That report summarizes the effect of the child labor provisions of the Act as follows:

1. Under interpretive rulings of the Federal Children's Bureau, the employment of children under 16 years is barred in manufacturing and mining, as operators or helpers on motor trucks and as messengers, but employment is permitted at 14 years outside of school hours in other occupations covered by the Act. It is estimated that, under these provisions, 50,000 children under 16 years have been removed from industry.

2. The American Newspaper Publishers' Association has urged its members to comply with the child labor provisions of the Act and dismiss newsboy sellers and carriers under 14 years, even though there has been no ruling or decision on the status of newsboys under the Act. According to newspaper reports, 60,000 boys under 14 years will be affected by this policy.

3. The number of minors 16 and 17 years of age who will be removed from their present jobs, under the power given to the Federal Children's Bureau to bar employment up to 18 years in occupations found to be hazardous, cannot be estimated at the present time for the Children's Bureau has not yet called any hearings which, it has announced, will precede the issuance of rulings of this character.

4. It is impossible to venture any estimate as to the number of children employed in agriculture who will be affected by the Act. Agriculture is covered only indirectly by a clause excluding children "employed in agriculture while not legally required to attend school." This will rule out protection for many thousands of migratory child workers, since in many states children of migratory families are not subject to the school attendance laws of the

communities in which they reside only temporarily. Nor will it apply to children employed in agriculture even during school hours in states where the school attendance laws expressly excuse, or permit exemptions for, children engaging in farm work. Moreover, the large majority of children engaged in commercialized agriculture work as part of a family group where the head of the house is paid and the other workers receive no compensation. Inasmuch as the child labor provisions of the Act do not apply to children employed by their parents, it is doubtful whether children so employed will come under the Act.

The Committee estimates that some 500,000 child laborers will not be covered by the Act.

These are children working in intrastate industries—chiefly mercantile and personal service occupations such as stores, garages, repair shops, laundries, hotels, and restaurants—and also many thousands of those employed in agriculture. The agricultural child laborers do not include children working at home on chores or other irregular work, but only children "gainfully occupied," according to the Census usage of the term. The Census defines a gainful occupation in agriculture as "an occupation by which the person who pursues it earns money or a money equivalent, or in which he assists in the production of marketable goods. The term gainful worker does not include . . . children working at home, merely on general household work, on chores, or at odd times on other work."

Evidently further legislation is needed. One way of providing it would be through state laws. Not much was accomplished in this direction last year. Bills to prevent children under 16 years from leaving school for employment were introduced into three (New Jersey, Virginia, and Massachusetts) of the nine legislatures that met in 1938, but all three were defeated.

A much surer way would be to obtain an amendment to the federal Constitution. Active work for the one which 28 states have already ratified and for which eight more ratifications are needed is being held up until the United States Supreme Court has passed on the validity of such ratifications—a point at issue in pending cases on which decision is expected soon. Directly that point is settled, friends of child labor legislation will either press for ratification of the present amendment in additional states or will consider starting work toward another amendment. As the Committee's report says, "an Amendment to the Constitution of the United States permitting the control of child labor in industries which do not cross state lines is as great a need today as ever."

Home economics associations have for years carried on their legislative programs measures for the control of child labor. In states where such measures are up in 1939, the associations will wish to make their influence felt as effectively as possible.

THE ADVISORY COMMITTEE REPORT ON VOCATIONAL EDUCATION

The Advisory Committee on Education, appointed by the President in 1936, undertook several special staff studies that were hardly more than referred to in the report which appeared in February 1938 and which was noted editorially in the May and June issues. One of these staff studies was on vocational education, and the results have just been published in the 325-page pamphlet officially listed as Advisory Committee on Education, Staff Study No. 8. The title is "Vocational Education," and the authors are John Dale Russell and associates. Dr. Russell will be remembered by home economists for the paper on "Federal Legislation for Aid to Education" which he gave at the Pittsburgh meeting of the American Home Economics Association and which was published in the November JOURNAL. Clara M. Brown and Opal T. Rhodes were the associates who helped gather and organize the material on home economics education for the vocational education study.

There has not been time since the appearance of the report to have it critically reviewed from the home economists' point of view. All that can be done in this issue is to point out passages of special interest.

Chapter II, on development of the vocational education program in our public schools, gives a clear and concise statement of the subject, with some reference to the educational philosophies which influenced it. Chapter III, on "Federal Organization and Administration," will be welcomed by those whose ideas on that complicated subject have been confused or vague. Valuable in the same way are the chapters on "State and Local Organization," "Financing the Federal Program of Vocational Education," and "General Evaluation of the Program."

The sections bearing most directly on home economics are found in Chapter VIII, "Evaluation of the Program in Specific Fields." Pages 137 to 144 briefly summarize the Committee's findings as to the home economics offered in the federally reimbursed program of vocational education. The following paragraphs indicate some of the points made:

> In general the program for vocational education in home economics has constantly tended toward a broad conception of the curriculum. The instruction in homemaking has moved toward an integration of general and vocational education. Emphasizing the social rather than the individualistic approach, it has expanded the accepted content of the subject until it includes much rich material from the whole field of the social studies not provided elsewhere in the curriculum of the secondary school. . . .
>
> . . . On the whole there is little unanimity in the opinions of these three groups of home economists [the heads of departments of home economics in colleges and universities, state supervisors of home economics, and city supervisors of home economics] as to what the present objectives for homemaking on the secondary school level are or even what they should be. If one considers the objectives which the largest number of each group accepted, it would appear that homemaking instruction today tends to be pointed toward intellectual understanding more than toward manipulative skill, and that this tendency is believed to be a desirable one. It also appears that the need for studying problems of personal living rather than future homemaking responsibilities is being stressed, and that this tendency is also desirable. There is less emphasis on aesthetic appreciation than on practice in homemaking tasks, both of which are judged to be equally important. In all groups the proportion who thought the social and economic factors should receive greater stress was larger than the proportion who thought these ideas were now sufficiently emphasized.
>
> The following data may help in understanding the need for an expanded program in home economics. In 1930 in continental United States there were 28,405,294 women homemakers; 20,192,119 persons were employed in trades and manufacturing or mechanical industries; 10,471,998 in agriculture; and 18,165,803 in all other occupations. In other words there were approximately as many women engaged in homemaking as there were both men and women in agriculture and in trade and industrial pursuits. If one considers that men as well as women are engaged in the homemaking enterprise, the number needing training for home and family life is about five times the number of those who need training for agriculture, and almost three times the number of those who need it for trade and industrial occupations. . . .
>
> If one accepts the premise that the content of homemaking education should be regarded as basic for all children and should perhaps be substituted for some of the traditional academic content which has little functional value for a large number of pupils now attending the secondary schools, the conclusion is inevitable that there is need for a greatly expanded program of homemaking education.
>
> In response to a request for an evaluation of home economics education in the vocational program, a committee appointed by a representative national organization has submitted the following statement:
>
> "The vocational program of home economics education is generally effective. It has contributed to the development of home economics by raising standards through the leadership of trained personnel, fostering professional spirit through group conferences and cooperative studies, developing a comprehensive program, and publishing the results of studies and research.
>
> "Factors which hinder the broadest usefulness of the program are: a tendency toward standardization and regimentation of subject matter and methods which is inherent in any educational plan so financed and administered; . . . the failure to develop the vocational program in relation to a broad pro-

gram of general education and the whole program of home economics; the failure to base the developments of the secondary and teacher training programs on adequate research and experimentation; the failure in some states to extend the benefits of leadership in the vocational program to all schools."

The findings of the present investigation in general indicate that the foregoing statement is a fair and accurate evaluation of the federally reimbursed program of vocational education in home economics.

The section on "The Program in Vocational Agriculture" contains material of interest to home economists, especially those working in agricultural extension programs; but there is not room here to quote more than the paragraph devoted to it in the final chapter, "Summary of Major Findings and Conclusions":

For the most part the teaching in vocational agriculture has been of high quality. A new and enriched curriculum is slowly emerging and the emphasis is being shifted from the manipulative skills and problems of production to problems of an economic and managerial nature. The development of a national organization of pupils in vocational agriculture, the Future Farmers of America, has been of doubtful wisdom.

The corresponding paragraph on home economics reads:

The program in home economics has in general been operated in a relatively satisfactory manner. Close cooperation between home and school has been fostered by the home projects. The curriculum of homemaking education has been broadened to include much content of a social nature.

THE BORDEN AWARD

The Borden award committee of the American Home Economics Association will be glad to receive communications concerning recently completed research on milk, published or unpublished, carried on by any member of the Association. Information about such research, accompanied by a reference to the place of publication or by the original manuscript or an abstract thereof, should be addressed to some member of the committee. The chairman is Dr. Margaret S. Chaney, Connecticut College, New London, Connecticut. The other members are listed on page 63 of the Association *Bulletin* for September 1938.

The award to be made this spring is the third of five annual awards of $1000 each given by the Borden Company for meritorious research on milk and milk products in the field of applied nutrition.

INTERNATIONAL FELLOWSHIPS

For some reason, perhaps mainly oversight, contributions to the international fellowship fund of the American Home Economics Association have not come in as rapidly as was expected this year. Unless more money is received soon, fewer fellows than usual can be appointed for 1939–40. The number and qualifications of the applicants remain high, and the present positions of women who have held fellowships in previous years prove the value of the plan. Thanks to co-operative arrangements with colleges, the Association contributes only $250 of each $500 fellowship. In fairness to the recipients, awards should be made as soon as possible; it had been hoped to make them in March this year. In other words, the international committee urges both student clubs and individual friends of the plan to send contributions as generous as possible as soon as possible. Please make out checks to the American Home Economics Association and send them to the secretary of the international committee, Miss Helen W. Atwater, 617 Mills Building, Washington, D. C.

RESEARCH

CO-OPERATIVE PROJECT IN TEXTILES CONDUCTED BY THE NORTHEASTERN EXPERIMENT STATIONS[1]

ANNE BROHEL SEARLE, ESTHER NAOMI CHAPMAN, AND ELIZABETH DOUGLASS ROSEBERRY[2]

The Pennsylvania State College

INTEREST has been increasing during recent years in the proper labeling and description of textile fabrics from the retail consumer's point of view. Before more accurate information may be made available to the consumer of this type of commodity at the time of purchase, however, a larger amount of information than is now available must be acquired on the relationship between the performance of textile fabrics during actual wear, and on other factors involved in consumer satisfaction with various kinds of wearing apparel fabrics.

Because it would be difficult for one person or one institution to obtain the large quantity of information required for the purpose in hand, representatives of the northeastern state agricultural experiment stations organized a co-operative project on the subject in the spring of 1935, on which active work was begun in September 1936. The six states actively participating are Maryland, New Hampshire, New Jersey, New York, Pennsylvania, and Rhode Island.

Project leaders and their associates in each of the states collect swatches of fabrics of specified size from consumers who are making them into women's or children's garments, and at the same time obtain information relating to the purchase of the fabrics. These are sent to the textile chemistry laboratory at the Pennsylvania State College, which serves as the testing laboratory for the project. Here the fabrics are tested by the methods to be described later. When garments made from the fabrics are considered to be no longer wearable by the person for whom they were originally made, they are sent to the testing laboratory where they are examined to find whether or not the performance of the fabric during wear has corresponded with the predictions based on the laboratory tests of the new material. The sales information on fiber content, methods of care, and performance of each of the fabrics also are compared with the facts shown by the laboratory and wearing tests. The degree of satisfaction of the

[1] Authorized for publication on November 21, 1938, as Paper No. 863 in the Journal Series of the Pennsylvania Agricultural Series; authorized September 28, 1938, as Research Paper No. 1 of the Co-operative Textile Series, Division of Home Economics Research, Pennsylvania State College.

[2] The first two authors are present members and the third is a past member of the research staff of the Pennsylvania Experiment Station. The project described is directed by a committee of staff members representing the participating institutions as follows: Maryland, Polly Bell Kessinger; New Hampshire, Daisy Deane Williamson; New Jersey, Inez La Bossier; New York, Beulah Blackmore; Rhode Island, Blanche Kuschke; Pennsylvania, Pauline Beery Mack, chairman.

owner in the performance of the garment likewise is ascertained.

Tabulations of data are made at the Rhode Island Experiment Station on an International tabulating machine.

Purposes of the study. Briefly, the immediate objectives of the study are:

1. To find the types of textile fabrics being purchased on the retail market for making women's and children's garments;
2. To ascertain the degree of accuracy of the sales information given concerning such points as the fiber content of the fabrics, the best method of caring for them, and their performance;
3. To find how closely the laboratory tests predict the wearing performance of the fabrics and to suggest modifications of the laboratory tests should this seem desirable;
4. To find the relation between price and such factors as fiber content, fabric construction, strength, colorfastness, residual shrinkage, and between the latter factors and consumer satisfaction.

The ultimate purposes of the study are:

1. To obtain information which will serve as a basis for planning units of work on the purchasing of textile fabrics for secondary, college, and adult classes interested in this field;
2. To find the type of information which would be of most value to the retail purchaser of textile fabrics and to set tolerances for the grading of this type of commodity from the consumer point of view.

Method of securing fabrics and making reports. Project leaders in the various cooperating stations are assisted by their teaching and extension staffs in persuading women or college girls to obtain an additional 30 inches of fabric when they purchase cloth for making a garment. In most of the states, this additional test fabric is paid for by the experiment stations. This length of test fabric is sufficient to provide specimens for the tests described beyond.

The test fabric, together with the information called for in Information Sheet Number 1, is sent by the experiment station leader to the testing laboratory.

INFORMATION SHEET NUMBER 1

Date.....
(Field agent or person responsible for sending fabric to laboratory)
Name.....
Address.....
.....

RECORD OF FABRIC

(To accompany fabric when it is sent to laboratory for analysis)
Name of owner of fabric.....
Address.....
Occupation.....
(1) Type of store at which fabric was purchased.....
(2) Size of town or city in which purchase was made.....
(3) Date of purchase of fabric.....
(4) Price paid per yard.....
(5) Width of fabric.....
(6) Weave.....
(7) Name of fabric (crepe, poplin, percale, etc.).....
Description of construction of fabric.....
.....
(8) Kind of garment to be made from fabric (everyday dress for woman, special occasion dress, underslip for woman, etc.).....
.....
(9) Were there any labels on the fabric, on the bolt, or on the display counter? If so, please give exact wording. If purchased from a catalog, please copy catalog description. (Put this information on the back of this page.)
(10) What oral information was given by the sales agency about the fabric, such as the following: (answer yes or no in the blank)
silk .....; weighted silk .....; lead weighted silk .....; rayon .....; spun rayon .....; wool .....; linen .....; cotton .....; or a mixture of any of these (please state what mixture was supposed to contain).....?
Also, was the fabric supposed to be launderable .....; dry-cleanable .....; nonshrinkable .....; nonstretchable .....; to slip or not slip at seams .....; to be colorfast to light .....; colorfast to washing .....; colorfast to dry cleaning .....?
(11) Description of person to wear garment made of fabric (woman, child, including sex and age of child).....; approximate weight .....; height .....; build (such as large hips, large bust, etc.).....

After the fabric is tested, a report such as that shown in Information Sheet Number 2

is sent in duplicate to the experiment station leader, who returns the second of these sheets to the purchaser of the fabric.

INFORMATION SHEET NUMBER 2

RECORD OF LABORATORY FINDINGS

(To be sent in duplicate to person at one of the experiment stations responsible for sending fabric. One copy is intended for station files, and the other for the person owning the garment, the fabric of which is analyzed.)

I. *Type of fiber* (as analyzed in the laboratory):

II. *Colorfastness tests*

A. Performance during crocking test—rubbing off of dye of coat linings on garments, or of garments on undergarments (dry, and dampened as from perspiration). This is rated by a scale in which, in Class 1, there is no crocking; in Class 2, some crocking; in Class 3, considerable crocking; and in Class 4, very heavy crocking.
Dry: Class
Wet: Class

B. Colorfastness to perspiration (rating is based on comparison with original fabric, and on bleeding of color onto white desized cotton, and onto white pure dye silk. Both acid and alkaline artificial perspiration preparations are used since persons vary in this respect). Classes 1, 2, 3, and 4 are used, Class 1 meaning no fading; Class 2, some; Class 3, considerable; and Class 4, very heavy fading.
Acid perspiration (comparable to fresh perspiration).....Class
Alkaline perspiration (comparable to aged perspiration).....Class

C. Colorfastness to light (determined by a Fade-O-Meter). The same rating class system is used as in B.....Class

D. Colorfastness to laundering or dry cleaning (as compared with original fabric and bleeding onto white desized cotton, white pure dye silk, white wool, white cellulose acetate, and white rayon). The same rating class system as B.
1. Laundering of cottons and linens.
a. At 160°F. with aid of bleaching agent, alkaline soap.....Class
b. Without aid of bleaching agent..... Class
c. At 105°F. with neutral soap..... Class

2. Laundering of washable rayons and silks (at 100°F. with neutral soap). Same rating class system for colorfastness as above.....Class

3. Colorfastness to dry cleaning of wools, most rayons, silks, etc. Same rating class system as above.
a. Dry cleaning.....Class
b. Wet cleaning (done with water as in a spotting process or wet-cleaning process).....Class

E. Colorfastness to dry pressing. (Pressing dry for ten seconds with the iron at the average heat used by a housewife and allowed to stand for two hours before comparing with original sample.) Same rating system as above.....Class

III. *Thread count per square inch.* (This is determined by counting the number of threads per square inch in both directions of the fabric, using a microscopic thread counter. Thread counts will vary with the type of weave. Within any one type of weave, a high thread count usually indicates a firm, even texture.)
Warp direction.....
Filling direction.....

IV. *Breaking strength* (number of pounds necessary to break a strip of fabric 6 inches long and an inch wide).
Warp direction. Dry ..... lbs.
Wet ..... lbs.
Filling direction. Dry ..... lbs.
Wet ..... lbs.

V. *Shrinkage*
To laundering
Warp direction: ..... %
Filling direction: ..... %
To dry cleaning
Warp direction: ..... %
Filling direction: ..... %
To wet cleaning (equivalent to method used by dry cleaner in removing certain spots)
Warp direction: ..... %
Filling direction: ..... %

VI. *Sizing and weighting* (percentage sizing, such as starch, etc., to give body to cottons, and percentage mineral weighting and water-soluble sizing in silks for the same purpose)—
Sizing ..... %
Weighting ..... %

VII. *Weight per square yard* ..... oz.

VIII. *Seam slippage* (number of lbs. necessary to produce slipping at seams, generally occurring in silks and rayons).

IX. *Remarks:*

When the garment is considered no longer wearable by the person for whom it was made, it is sent to the laboratory with the information contained on Information Sheet Number 3.

INFORMATION SHEET NUMBER 3

Date.....
(Field agent or person responsible for sending fabric to laboratory)
Name.....
Address.....
.....

RECORD OF GARMENT MADE FROM FABRIC NUMBER.....

(To accompany garment made from fabric previously analyzed. The garment is for inspection only and will be returned undamaged to the sender. The garment is to be sent to the laboratory when it is considered no longer wearable by the owner in its present form.)

Name of owner of garment.....
Address.....
Occupation.....

(1) Kind of garment made from fabric.....
(2) Type of pattern used.....
(3) Did you make the garment .....; did you have the garment made .....; when was garment made .....; did fabric fray excessively during making .....; did fabric creep out of place during making .....?
(4) Did the garment fit well .....; was there any undue strain on any part of it .....? If so, state place of strain (such as across shoulders, elbows, etc.) .....
(5) How long did dress wear in years .....; or months .....; or days .....?
(6) What was the average length of time it was worn in hours per week .....; or hours per month .....?
(7) How many times was garment dry-cleaned (a) at a commercial plant .....; (b) at home .....? Did it dry-clean satisfactorily? yes .....; no ..... If so, what type of spots.....?
(8) How many times was garment laundered (a) at commercial laundry .....; (b) at home .....? Did it launder satisfactorily? yes .....; no ..... If not, did it stretch .....; shrink .....; fade .....; iron satisfactorily .....; pull apart when wet .....; other damage.....?
(9) Did garment wrinkle easily.....? Did wrinkles fall out in hanging .....? Did you have difficulty in pressing or ironing it .....? If so, explain on back of this page.
(10) When did the effects of wear first appear on the garment.....?
Where did the effects of wear first appear on the garment.....?
Describe type of wear (ruffing, pulling, seam slippage, seam fraying, etc.), on back of this page.
(11) Why was the use of the garment discontinued (that is, was it out of style, worn out, faded, unbecoming, or some other reason)? Explain on back of page.
(12) Was the garment satisfactory for the purpose intended? (Explain on back of page.)
(13) Comments:

The garment is examined carefully in the testing laboratory to find its response to wear and to ascertain whether or not it performed during wear as was anticipated from the laboratory tests. It then is returned to the station leader with Information Sheet Number 4.

INFORMATION SHEET NUMBER 4

(Sent in duplicate to person at experiment station responsible for sending fabric, after garment has been sent to laboratory for inspection. One copy is intended for experiment station files, and one for person making garment.)

RECORD OF LABORATORY INSPECTION OF GARMENT

LABORATORY FINDINGS

(From Original Report)

Colorfastness:
Crocking:
Dry.....
Wet.....

Perspiration:
Acid.....
Alkaline.....

Light.....

Laundering:
High temperature with bleach.....

Low temperature.....

Low temperature for silks and rayons.....

Dry cleaning:
Dry method.....
Wet method.....

Dry pressing.....

Texture.....

Breaking strength:

	Warp	Filling
Dry	.....	.....
Wet	.....	.....

Durability prediction for a fabric of this type.....

Shrinkage: (Approximate inches per square yard).

	Warp	Filling
Laundering	.....	.....
Dry cleaning	.....	.....
Wet cleaning	.....	.....

Total percentage of sizing, weighting, or dressing.....

Weight per square yard.....

Seam slippage .....

INSPECTION OF GARMENT

Colorfastness:
Has the dye on the fabric rubbed off onto a white lining, or otherwise shown signs of crocking? .....

Does the garment show perspiration stain? .....

Has the garment faded?.....

Did the garment fade in laundering? .....

Did the garment fade in dry cleaning? .....

Did the garment fade or present other difficulties during pressing? .....

Is there any change in texture? .....

Did the garment tear or break? .....

Describe tearing or breaking.....

Did the garment shrink?.....

Has the fabric lost body? .....

If silk, has the fabric shown evidences of splitting? .....

Did garment pull out at the seams? .....

Fiber content test. All fabrics are tested chemically and microscopically to determine their fiber content.

Durability test. Silk fabrics are examined for thread count, for type of weave, and for percentage of water-soluble dressing and of total material other than silk fibroin (weighting). They are tested further for breaking strength; bursting strength; shrinkage and colorfastness during dry cleaning and during laundering (if sold as a washable fabric); performance during pressing; colorfastness when exposed to light, to perspiration, to various cleaning agents; crocking performance; yarn and seam slippage, water repellency, and crease resistance.

Woolen fabrics are examined for thread count, yarn construction, and type of weave. They are tested in addition for breaking strength; bursting strength; shrinkage and colorfastness performance during dry cleaning and pressing; colorfastness when exposed to light, to perspiration, and to cleaning agents; crocking performance; and for water repellency and crease resistance if they have been sold as having finishes which provide either one or both of these characteristics.

Cotton fabrics are examined for thread count, yarn construction, type of weave, and percentage of sizing and dressing. They are tested also for breaking strength; bursting strength; shrinkage and colorfast-

ness during laundering and pressing; colorfastness when exposed to light and perspiration; crocking performance; and for water repellency and crease resistance if they have been sold as having special finishes intended to give these properties.

Rayon fabrics are examined for thread count, yarn construction, and type of weave. They are likewise tested for wet and dry breaking strength; bursting strength; shrinkage and colorfastness performance during dry cleaning and laundering (if sold as washable); performance during pressing; colorfastness when exposed to light, to perspiration, and to various cleaning agents; crocking performance; yarn and seam slippage; water repellency and crease resistance if they are sold as having these characteristics.

Methods of making tests. The following procedures are used:

Thread counts. Thread counts are made by the use of a Leeds and Northrup microscopic thread counter.

Yarn construction and type of weave. These tests are made according to methods which pertain in textile mill laboratories and in commercial textile testing laboratories. Details of these tests will be given in a later report.

Determination of sizing and weighting in silks. Sizing and weighting in silks are determined by the method standardized by Mease (1). In this test, fabrics are heated to constant weight in an Emerson conditioning oven before and after the extraction treatments.

Determination of sizing in cotton fabrics. A sample of approximately 5 grams is used in each of the sizing determinations. First, the fabric is dried to constant weight in an Emerson conditioning oven maintained at 100° to 105°C.

The sample is then immersed in a 3 to 5 per cent distilled water solution of a diastatic or starch-splitting enzyme preparation for one hour.

As soon as the immersion period is over, the sample is rinsed in 12 successive portions of distilled water to insure removal of the enzyme; the fabric is squeezed after each rinse. The fabric is then dried to constant weight in the Emerson conditioning oven at 100° to 105°C.

The dry weight of the sample minus the dry weight of the fibers divided by the dry weight of the sample with the quotient multiplied by 100, equals the percentage of sizing, finishing, and other non-fibrous materials in the cotton.

Breaking strength tests. Breaking strength tests are made at a constant temperature of 70°F. and a constant humidity of 65 per cent, using the strip method of the American Society for Testing Materials (2). Reports are given in terms of strength in pounds both per one-inch strip and per thread.

In ascertaining the wet strength of rayons, the strip breaking strength method is used and the fabrics are wet by the procedure described in paragraph 8d of U. S. Commercial Standard for Testing and Reporting Woven Dress Fabrics (CS 59-36) (3).

Bursting strength tests. Bursting strength tests are made by the use of a motor-driven Mullen tester. The results are recorded as *net strength.* This is determined by subtracting the pressure needed to lift the diaphragm alone from that needed to lift the diaphragm and the fabric undergoing test.

Dry-cleaning tests. The various dry-cleaning tests are made in accordance with U. S. Commercial Standard 59-36 (3) as follows: paragraph 15, test specimens; paragraph 16, apparatus; paragraph 17, procedure for dry-cleaning test; paragraph 18, procedure for wet, dry-cleaning test; paragraph 19, procedure for pressing test; paragraph 20, reporting colorfastness in dry and wet cleaning; and paragraphs 39 to 44b, methods of testing and reporting shrinkage.

Launderability tests. Launderability tests for cotton are made according to the procedures suggested in U. S. Commercial Standard 59-36 (3) as follows: paragraphs 23 to 34b and 45 to 56, procedures for colorfastness and shrinkage tests during laundering.

Pressing test. Pressing tests are carried on according to the procedure in U. S. Commercial Standard 59-36 (3), paragraphs 21 and 22.

Colorfastness to light. Colorfastness to light is ascertained by the use of the Fade-O-Meter method outlined in paragraphs 35 to 38 of U. S. Commercial Standard 59-36 (3).

Colorfastness to perspiration. Colorfastness to perspiration is tested by the method included in the 1937 Yearbook of the American Association of Textile Chemists and Colorists (4).

Crocking performance. Performances of the fabrics during tests for crocking are determined by the method of U. S. Commercial Standard 59-36 (3), paragraphs 10 to 14.

Yarn slippage. Tests for yarn slippage are made according to the procedure in U. S. Commercial Standard 59-36 (3), paragraphs 57 to 64.

Water repellency. Water repellency of fabrics is tested by the use of a waterproof testing machine

purchased from Alfred Suter, engineer of New York City. The machine in use is 11 feet high, with a maximum waterhead of 72 inches. A machine of this size was obtained so that fabrics of a wide variety of weights could be tested for water repellency. In making a test with this machine, a piece of fabric 7 inches square is placed between disks sealed against leakage with rubber rings and clamped into place by lowering the proper clamp lever in the machine. Water is then allowed to flow onto the fabric until the under surface of the fabric is slightly rounded. A lever is now raised, causing the glass water cylinder to rise, thus creating pressure on the fabric. As soon as the drops appear on the under surface of the fabric, the pressure is read on a centimeter scale. A lever is then lowered to permit the cylinder to go back to place. The fabric is removed by raising the clamp lever. Results are recorded in terms of the number of centimeters of waterhead required to cause drops to appear on the under surface of the fabric.

Crease resistance. Crease-resistance tests are made according to the method of Schiefer (5), using a Flex-O-Meter secured from the American Instrument Company, Silver Spring, Maryland.

Accelerated ageing test. Accelerated ageing tests are made on a few special fabrics by the method of Appel and Jessup (6). The purpose is to determine within a brief time how a fabric will perform when subjected to a combination of ageing factors in actual wear.

Progress of the project. The fabrics analyzed up to September 1938 in the Northeastern Experiment Station Co-operative Textile Project are the following:

Total number	570
Numbers by states	
New Jersey	282
New York	151
Pennsylvania	48
Rhode Island	45
New Hampshire	27
Maryland	17
Numbers by fiber-content types	
Cotton	227
Rayon	188
Silk	66
Wool	48
Mixtures	
Wool and rayon	17
Cotton and rayon	6
Wool and cotton	4
Miscellaneous	14

Besides its educational value to the co-operators and to the women from whom fabrics are secured, the project already has numerous accomplishments to its credit.

When the Federal Trade Commission was deliberating on the establishment of trade practice rules regarding the shrinkage of woven cotton fabrics during 1937 and 1938, a considerable quantity of data on the incidence of shrinkage in cotton goods on the market from the retail consumer point of view and on the accuracy of retail sales information on this subject was made available to the Commission as a result of the project.

Again, when trade practice rules regarding rayon were under consideration by the Federal Trade Commission in 1937, a large body of information concerning rayon was assembled from the project files and presented to the Commission. Rulings favorable to the consumer have been adopted in both of these fields.

One of the valuable possible contributions of the project is in the improvement of tests so that they will simulate the effects of actual wear as nearly as possible. The study has indicated already that the present test for yarn and seam slippage is not sufficiently rigorous to predict accurately wearing performance in this respect. These results, not yet published, are in accord with the findings of Gregory and Mack (7). Furthermore, unpublished data from the project indicate that the test for launderability of colored cotton fabrics used in the study and in general use for this purpose [U. S. Commercial Standard 59-36, paragraphs 23 to 29 (3)] gives a satisfactory index to the colorfastness of a fabric during the first or second laundering but not during a large number of successive washings.

In addition, a large amount of information is being obtained both on the relationship of price, weave, fabric construction, and other factors to performance of fabrics, and on the factors constituting consumer

satisfaction with women's and children's wearing apparel fabrics of different types. Reports on special topics on which data are accumulated from the project will be published from time to time.

Summary. This is a brief report of the scope and progress of a co-operative textile project being conducted by six of the state agricultural experiment stations of the northeastern region. The participating stations are Maryland, New Hampshire, New Jersey, New York, Pennsylvania, and Rhode Island. Women's and children's wearing apparel fabrics totaling 570 have been tested thus far. Among accomplishments which have been discussed in the report, the project provides a means of amassing a large amount of data on the women's and children's wearing apparel fabrics on the market, and on the relative performance of representative fabrics during laboratory tests and wear. These data are valuable in the textile education field and in the work of standardization and correct labeling of textile fabrics which is making slow but continual progress.

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BOOKS AND PERIODICALS

NEW BOOKS

Health Insurance with Medical Care: The British Experience. By DOUGLASS W. ORR and JEAN WALKER ORR. New York: The Macmillan Company, 1938, 271 pp., $2.50.

A carefully documented yet genuinely human picture of the workings of the national health insurance program in the United Kingdom by an American physician and his wife, a trained social worker. Largely at the instigation of the National Federation of Settlements in this country they were granted the Barnett fellowship at Toynbee Hall, London, to make a comprehensive survey in Great Britain. Several sections of the book were prepublished in the *Survey* and have been abstracted in the JOURNAL. The complete version is likely to be widely read in connection with current discussion of programs for medical care in this country.

Healthy Babies Are Happy Babies. By JOSEPHINE HEMENWAY KENYON. *Revised edition.* Boston: Little, Brown and Company, 1938, 330 pp., $1.50.

The original edition of this simple, carefully prepared, well-organized "handbook for modern mothers" was noted in the JOURNAL for January 1935. It has now been brought up to date and certain minor gaps have been filled.

A Guide for Retail Advertising and Selling. Second edition, revised. New York: National Association of Better Business Bureaus, Inc., 1938, 88 pp., $1.

Part I of this "guide and reference to fair practice standards and definitions for retail advertising and selling, with dictionary index of trade terms, standards, descriptions, etc." deals with general fair trade rules as to comparative prices, materials, trade names and marks, substandards and seconds, bait advertising, and range of size and color. Part II takes up specific goods and services. Although primarily intended for business use, the book contains valuable information for consumer buyers and students of merchandising practice.

Behind the Label: A Guide to Intelligent Buying. By MARGARET DANA. Boston: Little, Brown and Company, 1938, 255 pp., $2.

Presents much valuable consumer information in a manner so interesting that pertinent facts about such topics as the five fibers, fashions, sizes, silk stockings, furs, and men's wear may be painlessly absorbed. A brief shoppers' summary of each chapter increases the book's usefulness. The chapter on "The End of Blind Buying: How to Read Advertising and Listen to Salespeople" should be read by every consumer.

What People Want from Business. By J. DAVID HOUSER. New York: McGraw-Hill Book Company, Inc., 1938, 250 pp., $2.50.

An attempt to determine what makes for satisfactory attitudes in the two groups upon which business organization depends—the workers or employees and the consumers or customers—and to show how their attitudes may be integrated. The author holds that it is the "unchecked ego motive" on the part of management, not the profit motive, which has been responsible for resentments against business and that "a genuinely intelligent profit motive would have prevented much of the attack."

Household Physics. By MADALYN AVERY. New York: The Macmillan Company, 1938, 439 pp., $3.50.

A textbook in applied physics for college home economics students. The applications in it "have been chosen from the daily household life and from the various commercial fields

which home economics students enter." Based on ten years' experience in teaching household physics at Kansas State College, the procedures suggested are believed to show the relation between theory and practice and to adapt themselves to practical class conditions.

Slaves by the Billion: The Story of Mechanical Progress in the Home. By SILAS BENT. New York: Longmans, Green and Co., 1938, 244 pp., $2.50.

Household laborsaving and comfort-producing devices discussed in an entertaining, somewhat anecdotal way, with an introduction by Katharine Fisher, director of Good Housekeeping Institute.

Genetics: An Introduction to the Study of Heredity. By HERBERT EUGENE WALTER. *Fourth edition.* New York: The Macmillan Company, 1938, 412 pp., $3.

The author, who is emeritus professor of biology at Brown University, describes this "new book under an old title" as the fourth "generation" of a volume "born into a more expanded and sophisticated world of genetical science than that in which its great-grandfather lived a quarter of a century ago." The revision maintains the effort to provide "a treatment of the subject understandable to the uninitiated," even though it does not venture so far afield as some books in the field.

An Introduction to Industrial Mycology. By GEORGE SMITH. London: Edward Arnold & Co., Ltd. [American agent: Longmans, Green and Co., New York City], 1938, 302 pp., $5.20.

Intended to assist those who are commencing the study of "moulds" rather than of fungi in general, this book is addressed primarily to non-botanists who deal with problems of moulds in industry and who are unfamiliar with mycological terminology. Enough general mycology is included to enable the student to follow up the subject in standard textbooks. The author is on the staff of the London School of Hygiene and Tropical Medicine.

The Art of Enjoying Art. By A. PHILIP MCMAHON. New York: Whittlesey House, McGraw-Hill Book Company, Inc., 1938, 319 pp., $3.

The author, professor of fine arts at New York University, urges the layman to approach art "at the three levels of sensation, technique, and form," and in explaining each step refers to the masterpieces shown in the hundred pages of illustrations. There is also a reading list whose classifications suggest the author's method; for example, "Learn by Doing," "The Mode of Common Experience," "Perspective," "The Mode of Manipulation," "Technique and Design," "Processes of Sculpture," "Materials and Tools of Architecture," "Aesthetic Systems."

Make It Yourself. By JULIAN STARR, JR. New York: Whittlesey House, McGraw-Hill Book Company, Inc., 1938, 333 pp., $2.50.

How an amateur with a taste for using tools can make all sorts of useful things, from garden chairs and concrete lily pools through Christmas cards and dollhouses to weathervanes, screen doors, and metal ash trays. The reader will easily believe the author (he runs a special column in the New York *Sun*) when he says he had fun making them himself.

Color Photography for the Amateur. By KEITH HENNEY. New York: Whittlesey House, McGraw-Hill Book Company, Inc., 1938, 281 pp., $3.50.

A practical book on the making of transparencies and prints by the various available methods. It contains enough explanation of the delicate processes involved to enable the layman to use them intelligently. The author is a well-known electrical engineer and editor whose hobby is amateur photography.

Fist Puppetry. By DAVID FREDRICK MILLIGAN. New York: A. S. Barnes and Company, Inc., 1938, 130 pp., $1.50.

According to the author, these inexpensive and amusing little relatives of Punch and Judy and Guignol can be made and operated by children as well as grownups, at home, in school, or in a community entertainment. He tells how to do it, then outlines ten old fairy-tale favorites as they are adapted to puppetry and suggests where to find others.

Songs and Pictures for Little Folks. Words and music by HELEN C. KNOWLES; photographs by RUTH ALEXANDER NICHOLS. New York: A. S. Barnes and Company, 1938, $1.50.

Simple rhymes and tunes for little children, each one a separate page below an attractive and appropriate picture.

Rhythms for Children. By MARY S. SHAFER; music by MARY MORGAN MOSHER. New York: A. S. Barnes and Company, 1938, 47 pp., $1.25.

Rhythms for use by first and second grade children in gymnasium periods and calling for activities that these children spontaneously enjoy. In fact, almost all of the music and the accompanying action have been worked out by pupils in the Horace Mann School.

Carlos: Our Mexican Neighbor. By MARGARET LORING THOMAS. Indianapolis: The Bobbs-Merrill Company, 1938, 189 pp., $1.50.

The wife of an American engineer who has lived in various Latin-American countries now adds Mexico to the scenes of her books for children. The story, which is full of local color, tells of a little boy in a community where very simple public schools and other social services are being developed for the first time, somewhat at the expense of the landowners, among them the boy's grandfather. By making the father a supporter of the new regime and in sympathy with the peons, Mrs. Thomas has devised a setting in which the conflicting interests of present-day Mexico can be fairly shown to children.

Lockstitch and Chainstitch Sewing Machines. By W. RICHES. New York: Longmans, Green and Co., 1938, 85 pp., $1.50.

A concise textbook for beginning sewing-machine mechanics but containing information indirectly useful in connection with quality in clothing construction.

How to Enjoy Ill Health. By CECILIA L. SCHULZ. New York: Whittlesey House, McGraw-Hill Book Company, Inc., 1938, 194 pp., $1.75.

Common-sense advice for the temporary invalid or the convalescent amusingly given by a trained nurse whose seven years' experience in the specialized work of secretary-nurse to patients in many countries has given her to know whereof she speaks.

Psychological Factors in Marital Happiness. By LEWIS M. TERMAN, *et al.* New York: McGraw-Hill Book Company, Inc., 1938, 474 pp., $4.

A ten-year investigation of sex differences in interests, attitudes, and thought trends has led the authors of this fairly technical volume to the conclusion that most marital happiness embraces many interrelated satisfactions which cannot be measured in quantitative terms and can only be qualitatively described. These satisfactions and the factors which affect their quality are discussed on the basis of information schedules filled in anonymously and independently by the husbands and wives in 792 California couples.

Educational Broadcasting: Proceedings of the Second National Conference on Educational Broadcasting, Held in Chicago, Illinois, on November 29, 30, December 1, 1937. Edited by C. S. MARSH. Chicago: The University of Chicago Press, 1938, 387 pp., $3.

Aside from addresses at the general sessions, discussions at section meetings are here reported so that the volume reflects the current opinions of people seriously interested in the educational use of radio. Among section topics and discussion chairmen are: "Radio and Child's Education," Carleton Washburne and Arthur T. Jersild; "Classroom Use of Radio," Horace M. Buckley; "Symposium of Listeners," George V. Denny, Jr.

Everyman's Drama. By JEAN CARTER and JESS OGDEN. New York: American Association for Adult Education, 1938, 136 pp., $1.

Rural America Reads. By MARION HUMBLE. New York: American Association for Adult Education, 1938, 101 pp., $1.

The Museum and Popular Culture. By T. R. ADAM. New York: American Association for Adult Education, 1939, 177 pp., $1.

Three further additions to the series first described in the JOURNAL for January 1938.

ABSTRACTS

CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

Verbalization and language symbols in personality adjustment, M. SHERMAN. *Am. J. Psychiat.* **95,** No. 3 (Nov. 1938) pp. 621–640.

A review and discussion of the relation of language development to personality adjustment in which it is shown that a skilled observer may detect personality disturbances by observations of the language of an individual long before there are distortions of overt activity. The way in which language comes to replace overt expressions of behavior in children is traced on the basis of the experimental evidence.

Propinquity of residence before marriage, M. R. DAVIE and R. J. REEVES. *Am. J. Sociol.* **64,** No. 4 (Jan. 1939) pp. 510–517.

An analysis of all the marriage licenses issued in New Haven in 1931 shows that marriage is an in-group affair, that is, the two contracting parties tend to be of the same race, nationality, religion, and socio-economic status; they also tend to be from the same residential area.

Recent increases in marriage and divorce, S. A. STAUFFER and L. M. SPENCER. *Am. J. Sociol.* **64,** No. 4 (Jan. 1939) pp. 551–554.

A study of marriage and divorce rates since the 1930 census shows a steady increase in both. In 1937 the number of marriages per 1,000 women aged 15 to 44 probably reached the highest point in 15 years, while the divorce rate may have been the highest in the history of the United States.

Health in the adolescent period, A. HYMANSON. *Arch. Pediat.* **55,** No. 12 (Dec. 1938) pp. 727–731.

The author cites evidences of ill health among adolescents, especially disturbances of the glandular system. He recommends preventive measures, with sex instruction about reproduction, menstruation, emissions, venereal diseases, careful periodical physical examinations, treatment of all aches and pains, calm handling and guidance on the part of parents. He concludes that adolescence is obviously a period of special danger to health.

Child Study **16,** No. 3 (Jan. 1939) pp. 82–91.

The theme of this number is that, having passed through the "tell all" stage of sex education, it is now our problem to really study and experiment to find out what a sound program in sex education for children would be. Fritz Redl advocates the free discussion by the child of his own ideas about sex before he is given information by adults or books. Jacob Conn concludes from interviews with many children that what is needed is not "one talk" or many about the facts of life but "a graded program of sex education, beginning with an effective sex vocabulary in the preschool years and continuing in close contact with the sex events of everyday life," including sex discussions with other children and some form of sex experimentation. Valeria Parker gives helpful material about "What Young People Want to Know About Sex," based on the hundreds of questions she has received from young people of all ages and economic status. Benjamin Gruenberg outlines a program for schools in the field of sex education recommending the integration of sex education in the whole curriculum rather than specialization in talks or unusual occurrences.

Journal of Social Hygiene **24,** No. 8 (Nov. 1938).

This special number is devoted to recent changes in laws regarding marriage, venereal disease, and premarital examinations, and includes the following articles: "Shall We Break with Tradition in Marriage Laws?" by Paul Cornell; "Facts Behind the Laws," Mary S. Edwards; "Premarital and Prenatal Examination Laws," Bascom Johnson; "Public Opinion and New York's 'Baby Health Bill,' " Edward C. Kienle; "How the New Jersey Law Was Passed," John Hall; "Catholic Attitude Toward Some Hygienic Legislation," Francis P. Cavanaugh. The progress made and public opinion about recent changes are portrayed.

Journal of Social Hygiene **24,** No. 9 (Dec. 1938) pp. 527–553.

This special number on sex education and youth summarizes current trends. Articles include: "Sex Education in America Today," Maurice A. Bigelow; "Sex Education in Secondary Schools: 1938," Benjamin C. Gruenberg; "Integration of Sex Character Education with the Teaching of Biology," Margaret Stewart Funk; "A College Summer Session Course in Sex Education," Frances Bruce Strain; "Education and the Family," J. Laurence Meader; and "Sex Education for Parent Groups: Outline of Four Lectures for Popular Presentation," Valeria Hopkins Parker. There is also a bibliography, "Selected References on Sex Education in Home and Schools," which lists both pamphlets and books.

The psychological hygiene of infant feeding, A. GESELL. *Ment. Hyg.* **22,** No. 2 (April 1938) pp. 216–220.

As a result of intensive studies of 80 infants over a period of years, the conclusion is reached that the infant's self-demands are important and he is most directly and most completely satisfied if they are heeded and he escapes the pangs of frustration and the feelings of anxiety that might follow undue denials and delays. Foods and sleep should be carefully adapted to the infant's individuality to multiply his experiences of security and satisfaction and to promote his mental health.

Middle childhood to early adolescence. *Progressive Educ.* **15,** No. 7 (Nov. 1938) pp. 522–566.

This neglected period of child development is the subject of this special number. Caroline B. Zachry proposes questions raised by her work with adolescents. Jean Walker MacFarlane, director of child guidance study at the Institute of Child Welfare, University of California, presents "Some Findings from a Ten Year Guidance Research Program." In "Years of Transition," G. Derwood Baker of the Fieldston School of the Ethical Culture Society, New York City, summarizes the facts available from recent studies. "A Study of Early Adolescent Personality" by W. J. Cameron reports observations of adolescents in a free situation, a clubhouse of their own. In the last paper, "We Want a New Education," a high school student stresses the need of education for health, for bringing up children, for sex instruction in secondary school rather than college, where it is too late to reach many students.

Progressive Education **15,** No. 8 (Dec. 1938) pp. 589–616.

This entire issue is given over to reports on early and late adolescence based on the researches of the Commission on Secondary Education of the Progressive Education Association, especially the Committee on the Study of Adolescents. Home economics teachers will be particularly interested in "Some General Characteristics of Adolescents" by Caroline B. Zachry; "How Can We Use the Insights of Youth" by Alice V. Keliher; "Guiding the Adolescent" by Mary Cover Jones; and "Immediate Social Relations of Students in Junior and Senior High Schools" by Lois Hayden Meek.

Socio-economic status and intelligence: A critical survey. *Psycholog. Bull.* **35,** No. 10 (Dec. 1938) pp. 727–757.

A review of recent experimental literature confirms the former findings that, in general, children of the lowest urban social group (unskilled, common laborers) average about 20 points lower in intelligence than children of professionals. The constancy of the I.Q. is questioned in the light of the data from various experimenters showing that in individual cases there are often changes of 20 and in some cases 50 points. Evidence of the effect of residence in a poor environment is presented; studies in which the kind of home influences the I.Q. of the foster children are summarized; and the effect of age on relationships, showing an increased influence of environment as the child gets older, and the statements regarding the development of identical twins raised apart from one another, are quoted. The conclusions reached are that the results of standardized tests are far from constant; that continued residence in a poor environment brings about considerable loss in I.Q.; that transition to a good environment brings about large increases

in I.Q.; that very possibly the positive relation between age and social status does not exist below early age levels; that there is a correlation of +0.50 between social status and intelligence, even when heredity is constant; that the inequality of social and economic opportunity renders suspect the assumptions that knowledge and information are a direct function of native ability and that the former may be used to measure the latter; and finally, that the 20-point difference in I.Q. may be accounted for entirely in environmental terms.

Overcoming fear, C. JERSILD. *Parents' Mag.* **13,** No. 12 (Dec. 1938) pp. 22, 55+.

Not all fears in little children are due to physical causes or manifested on the surface of a child's life and actions. A new baby may cause the older brother or sister to become afraid of her place in the family. Imaginary ideas, such as ghosts, lions, robbers, and other improbable menaces, may occupy a child's waking moments. Anxieties often grow out of general insecurity and become attached to imaginary characters. Certain rules will help prevent emotional stress; for example, never use fear as discipline. The example of the adult is important. Explanations, bribery, ridicule, and scorn are useless in overcoming fears. Forcing the child into the feared situation is dangerous. Giving the child ways of managing feared situations, such as a light he can turn on and off in the dark, letting him become accustomed gradually to the feared situation, substituting pleasurable situations such as play for fear, helping him acquire skills, will help the fears to disappear.

Some babies train themselves, E. E. MELON. *Parents' Mag.* **14,** No. 1 (Jan. 1939) pp. 16–17.

The recent trend away from arbitrary procedures and too early beginning in toilet training is clearly outlined. The neurologist says the baby is not ready physiologically until he is nearly two. By waiting, the child can learn more easily and in a briefer time. The motto for the mother should be "take it easy," avoid pressure or conflict, wait until the child is ready to take on a new accomplishment, then turn the responsibility over to the child.

College as transition, R. D. LEIGH. *Progressive Educ.* **16,** No. 1 (Jan. 1939) pp. 51–58.

Describes the nature and needs of late adolescence as seen in 650 young women enrolled at Bennington College. They show the same fundamental needs and desires as do young children "for a sense of security, a sense of belonging, a job which seems worthwhile, the freedom to work at it." Two major desires are seen, "one toward finding a mate, the other toward becoming a self directed person doing something significant which is recognized as such." Difficulties found frequently are: inferiority, timidity, and insecurity; personal dependence and transference; negativism, anti-authoritarianism; manifest homosexual preoccupations; exhibitionism and super ego; perfectionism; lack of work motivation; and escapism.

An investigation of conditioned feeding responses and concomitant adaptive behavior in young infants, R. W. KANTROW. Studies in Infant Behavior IV, *Univ. Iowa Studies in Child Welfare* **13,** No. 3 (July 1, 1937) 64 pp.

Based on one of a series of studies of infant behavior done under Dr. O. C. Irwin's supervision, this monograph gives a clear outline of the steps used to condition the sucking responses of 16 infants, ranging in age from 6 to 14 weeks, to the sound of a buzzer. The establishment of stable responses required from 3 to 9 experimental feedings which contained from 16 to 50 three-paired stimulations and required from 1 to 5 days. The prime motivating factor was hunger; satiation prevented conditioning. The infants exhibited the capacity to utilize significant signals and to discard false leads, activities which in more complex forms are found in the adaptive behavior of children and adults. The conditioned reflex technique is seen as a valuable aid for the study of the basic mechanisms of intelligent behavior in infants.

E. McG.

CONSUMER PROBLEMS

Registration and approval of public health laboratories as carried on in Connecticut, F. L. MICKLE. *Am. J. Pub. Health* **28,** No. 10 (Oct. 1938) pp. 1185–1192.

Much annoyance and even risk to health arise from inaccurate or conflicting laboratory reports in matters relating to public health. Much of this could be avoided by a system of registration and approval of laboratories, equipment and reagents, and personnel. The obvious agency for the supervision of such a system is the state public health department. Connecticut has found such an arrangement to result in fewer complaints from physicians and patients and fewer conflicting reports.

Fear more state drug laws. *Bus. Wk.*, No. 480 (Nov. 12, 1938) pp. 24, 29.

Nearly all of the 40 state legislatures meeting in January will have a food and drug act to consider. North Dakota already has one of the most effective laws in operation. Meats, dairy products, canned vegetables, spray residue, bakery products, beverages, spices, dairy and stock feeds, and drugs are tested and bulletins showing the results are issued. In addition there are special laws governing such things as paints, fertilizers, lubricating oils, and sanitation in food and drug establishments, hotels, tourist camps, and dairies. Each restaurant, hotel, and rooming house receives a rating which is published. The department supplements the work of professional testing bureaus, thus making possible more dependable work from these ordinarily inadequately equipped agencies.

New co-op merchandising plans. *Bus. Wk.*, No. 483 (Dec. 3, 1938) p. 32.

Eastern Co-op Wholesale is adopting policies of merchandising efficiency by launching a 12-week course in grocery store management and by setting up a model testing kitchen. A third project, not yet ready to launch but being carefully considered, involves the preparation and use of a uniform label for co-operative goods. It is hoped that with a uniform label, uniform grades can be established and national brands developed for co-operative goods. It is tentatively planned to use color in the label to indicate the quality of the product, as red for first quality, blue for second. Part of the label would be used for a description of the product and directions for its use, part to tell something of the co-operative movement.

New responsibilities for consumers, MRS. E. C. FRANKLIN. *J. Am. Assocn. Univ. Women* **32,** No. 1 (Oct. 1938) pp. 33–36.

The Food, Drug, and Cosmetic Bill passed last June brings all cosmetics except toilet soap under the jurisdiction of the Food and Drug Administration and opens the way for positive regulations for foods, drugs, cosmetics, and therapeutic devices. Provisions relating to drugs and cosmetics, which become effective immediately, should prevent further tragedies such as have occurred in the past because of lack of such safeguards. Other provisions of the Act will become effective one year from date of approval. The Food and Drug Administration will hold public hearings and promulgate regulations. Provision for definition and standard of identity and a reasonable standard of quality for each food, prohibition of slack filling and deceptive containers for packaged foods, and more informative labels will make possible more intelligent buying of food. Labels for drugs covering warning against misuse which may be injurious to health, against habit-forming properties, as well as deviations from standards of strength and purity, reduce the danger of poisoning. It is no longer necessary to prove intent to defraud; proving the label false is sufficient. Quantity of contents and name and place of manufacturer must appear on cosmetic labels. The Food and Drug Administration now has full power of factory inspection in establishments producing food, drugs, cosmetics, and therapeutic devices for shipment in interstate commerce. The criminal penalties have been increased. By providing for judicial review of the regulations in the United States Court of Appeals instead of in the United States district courts as was first proposed, the possibility of using indefinite court proceedings to defeat the purpose of the act was reduced to a minimum. Enforcement

of the law depends on consumer response to the obligations of education, participation in enforcement, and support of further measures for improvement. It should not be left to producers to determine the definitions and standards of identity which will be called for in public hearings effecting regulations. Among the needs yet to be supplied by law are multiple quality grades and grade labeling, definitions and standards of identity for dried fruits and vegetables, inclusion of soaps in cosmetic regulations. The Wheeler-Lea Act, which gives to the Federal Trade Commission enforcement of prohibitions on fraudulent or misleading advertisements of foods and drugs, places on consumers the responsibility for bringing to the attention of the Commission statements which appear to be misleading.

Standard vegetables change growing, distributing methods. *Ind. Stand.* **9,** No. 11 (Nov. 1938) p. 266.

The use of standard-size containers and the increasing practice of packaging vegetable products lead to the standardizing of vegetables by growers. The curved neck has been removed from the summer squash, cucumbers are being made more uniform, and celery is growing shorter. The growers are also doing more of their own grading and packaging, thus making the commission merchant less important economically.

Good Housekeeping explains its certification procedure. *Ind. Stand.* **9,** No. 11 (Nov. 1938) p. 274.

Good Housekeeping answers the article by L. H. Clark, "How Three Organizations Certify Consumer Goods," in the September issue of *Industrial Standardization*, with four statements of policy. First, the advertising of a product in *Good Housekeeping* has never been a requirement for its testing and approval. Second, consumers are informed through the magazine and various buying guides that they may learn on request the names of products disapproved. Third, consumers are told in booklets distributed by tens of thousands, as well as through the magazine, the nature of the testing standards and procedures. Fourth, *Good Housekeeping* assumes responsibility for satisfaction from products they have tested and approved.

Parents' Magazine starts new service based on Seal of Acceptance. *Ind. Stand.* **9,** No. 11 (Nov. 1938) pp. 277–278.

Parents' Magazine has established a Consumers' Service Bureau. The Acceptance Seal, symbol of approval of the Bureau, represents more than the usual laboratory tests. These are supplemented by "use tests" in representative homes, day nurseries, or child welfare institutions. Each month a subject selected from inquiries received, is discussed in the Consumers' Service Department of the magazine. In these discussions, brand names are used and the magazine endeavors to secure satisfactory adjustment if defects are found in approved products.

Management and the public, W. S. BATT. *Ind. Stand.* **9,** No. 12 (Dec. 1938) pp. 292–295.

With management lies the responsibility for providing the means to better living through the production of more goods at lower prices. Increasing government intervention makes this more and more difficult. The principles of standardization, applied to a greater extent in America than anywhere else, constitute one of the greatest aids to the achievement of more efficient methods by management. Co-ordination within industry and also between industry and agriculture, labor, and the government, is of equal importance and is furthered by standardization. With these two aids, management may hope to accomplish the task.

Lanham Bill revised. *Printers' Ink* **185,** No. 1 (Oct. 6, 1938) pp. 59, 84.

The Lanham Bill, new federal trade-mark law, has been redrafted and amended by the subcommittee of the congressional committee on patents and a committee of the American Bar Association, and will be the basis for a new bill to be introduced in Congress. The bill carries much the same type of regulation as is to be found in the existing patent laws with reference to "trade-marks used in commerce, to carry out the provisions of certain international conventions, and for other purposes." Certificates of registration would be issued

under the seal of the Patent Office and would remain in force for 20 years, subject to renewal for like periods of 20 years on payment of the renewal fee.

[In an editorial in the same publication (p. 96) the passage of the Lanham Bill is strongly advocated as a preventive measure against projected state trade-mark laws which might not be so good.]

Why consumer movement isn't getting anywhere, P. T. CHERINGTON. *Printers' Ink* **185,** No. 10 (Dec. 8, 1938) pp. 9–10+.

The consumer movement has failed to become really powerful because it has concerned itself with the technical standards applicable to merchandise, "a completely hopeless and backward approach." On the assumption that "if consumption calls for a certain type of goods they will be produced," the author advises consumers to "start with specifications for use and performance," agree upon check lists made up of their performance requirements, and shop with them in hand. "If the consumer movement genuinely wants to move . . . instead of trying to concern itself with things which it cannot comprehend and which are of no essential significance anyhow, let it begin with formulating check lists of what it wants."

Super-market, miracle of modern merchandising, M. M. ZIMMERMAN. *Printers' Ink* **185,** No. 11 (Dec. 15, 1938) pp. 15–18+.

The super-markets, regarded two years ago as merely depression products, are today setting a merchandising pace that is forcing other types of food stores to vigorous measures for survival. In September 1938, more than 400 super-market operators held the second annual convention of the Super-market Institute. The reports of this convention convinced manufacturers that co-operation with this new industry was the only course open to them. Up to 1936 the chain-store operators believed that they had achieved the height of efficiency and economy in retailing. Many of the wholesalers recognized the potentialities of the super-market and opened their own, keeping their names hidden. The manufacturers saw the possibility for pushing their own brands in the super-markets, having suffered from the competition of the chains' own private labels. Starting in the Southwest and on the Pacific Coast, the super-markets are now found in 37 states. In most cities where super-markets are located, they now control a larger percentage of the food traffic than do chain stores with many more units.

Uniform state food law is drafted. *Printers' Ink* **185,** No. 11 (Dec. 15, 1938) p. 84.

The Association of Food and Drug Officials of the United States will present to all state legislatures meeting in January a model state law covering merchandising of foods, drugs, and cosmetics. This act goes further than the present law in several particulars, notably a grade labeling proposal. [See February JOURNAL, 110].

Fiberglas. *Tide* **12,** No. 22 (Nov. 15, 1938) p. 13.

After years of research, the glass industry's dream of glass textiles is realized in "Fiberglas." The first inorganic textile material, a spun fiber product, is noninflammable, unaffected by acids, and resists heat up to 2200°F. Its uses are as yet confined to industry.

Misery market. *Tide* **12,** No. 22 (Nov. 15, 1938) p. 13.

The twenty per cent or so of our population who suffer from allergies should prove a profitable field for alert manufacturers who could play up the allergen-proof possibilities of foods, air-conditioning apparatus, upholstery, or vacuum cleaners.

Guild and friend. *Tide* **12,** No. 22 (Nov. 15, 1938) p. 14.

The National Good-will Guild, which sponsors the plan of rebates for labels of specified brands purchased by church women, is about to be launched, coincidentally with a new line of staple grocery items, Guest House brand, manufactured by Major Foods, Inc.

R. A. H.

EDUCATION

Contributed by the Home Economics Education Service, United States Office of Education

GENERAL

Trades students taught consumer viewpoint. *Am. Consumer* **6,** No. 7 (Oct. 1938) p. 14.

The newly opened Food Trades Vocational High School in New York City has an enrollment of 300 and requires of its teachers at least 9 years of practical experience in the food industry. The school operates a grocery store, a bakery, a cafeteria, and a butcher shop where pupils spend half of each 6-hour day. The other half is devoted to regular academic work of high school grade. Elementary or junior high school graduates are eligible, the course lasts four years, and there is no tuition fee. Products of school work are sold to students, teachers, and school departments but not to outsiders, so that there is no competition with local stores.—R. A. H.

Academic freedom, H. W. TYLER and E. P. CHENEY. *Ann. Am. Acad. Pol. & Soc. Science* **200,** (Nov. 1938) pp. 102–118.

A high degree of freedom of research, of teaching, and of learning are essential if colleges and universities are to fulfill their purposes of teaching familiar facts, extending the boundaries of knowledge, and developing the intelligence and mental power of youth. "Academic freedom is for the community a guarantee of securing to society the best service of men of advanced thought and knowledge; for institutions a means of attracting and retaining men and women of superior quality; for teachers and investigators, a privilege to be deserved by the exercise of a just measure of both freedom and self restraint, by supporting and living up to the best standards of their profession."—R. V. H.

Promoting world citizenship through social relations, G. WATSON. *Bull. Dept. Secondary School Principals* **22,** No. 78 (Dec. 1938) pp. 5–15.

A discussion of some of the problems involved in promoting world citizenship with special consideration to the responsibility of teachers in such a program.—M. W.

Gift-making. *Childhood Educ.* **15,** No. 4 (Dec. 1938) pp. 159–163.

A diversified list of suggestions for gift-making, particularly appropriate for elementary school children, is presented. The list is classified according to materials from which the gifts may be made and for the member of the family for whom they will be most appropriate.—R. V. H.

Learning democracy in the classroom, C. A. SEEDS. *Curric. J.* **9,** No. 6 (Oct. 1938) pp. 270–271.

Democratic living involves the concept of people living together socially in ways determined by them to be for the best interests of all. In the schoolroom this means that all children will not be required to do the same thing at the same time. In classrooms where democracy is inherent the pupils learn among other things to give and to share, to choose wisely with reference to group needs, to think and work responsibly, to offer constructive criticism, to challenge that which is doubtful, and to be tolerant. Some educators question whether such experiences assure more democratic living out of school; and it is believed that while much of the social situation must be remade to guarantee a carry-over, to "live democracy" assures adult life on a higher ethical plane, than to read about it.—R. V. H.

Motion pictures at Ohio State University. *Curric. J.* **9,** No. 8 (Dec. 1938) p. 340.

The general education program of the University includes the utilization of a University motion picture theater. Two general types of films are shown: those dealing with specialized subject matter areas and general films such as those portraying biographical records. Students are admitted free.—R. V. H.

Educating the child for real life, C. N. ALDERTON. *Educ. Method* **18,** No. 3 (Dec. 1938) pp. 113–118.

Educational agencies outside of the school, such as the movies, the newspaper, and other

out-of-school interests, are considered. Suggestions are offered concerning ways in which the modern school may help its pupils select those activities helpful to growth.—R. V. H.

Understanding the child's needs, H. R. STOLZ. *J. Natl. Educ. Assocn.* **27,** No. 7 (Oct. 1938) p. 194.

Suggestions for individual guidance are included in a discussion of the child's needs which are basic for planning the school program. "Teachers can only evaluate what they are doing by studying the child who is not relaxed, who has no friend, who is not accepted by other children, who is not increasing in his understanding, who cannot express himself."—S. M. B.

The home economist in business, C. G. WOODHOUSE. *Occupations* **17,** No. 2 (Nov. 1938) pp. 135–138.

A discussion of the increasing opportunities for the home economist in business, giving some of the duties connected with the various types of home economics work for business concerns, such as food manufacturers, dairy councils, commercial food service, home service departments of electrical and gas companies, consumer service departments of manufacturers and distributors of textiles, and newspapers and magazines. The discussion includes the range in salaries for the various type jobs and the training and personal qualities essential for success.—A. L.

The W.P.A. prepares women for housework, E. S. WOODWARD. *Occupations* **17,** No. 3 (Dec. 1938) pp. 220–222.

A description of the type of program operated by the W.P.A. to prepare women to earn their living as household workers. A survey made in 1938 by the U. S. Employment Service indicated that there were 400,000 jobs available in household service for trained personnel, at which time only 125,000 persons, 64,000 of them from relief rolls, were registered with the Service for household work.—A. L.

ELEMENTARY AND SECONDARY SCHOOLS

Relationship between secondary school and college, R. H. TUCKER. *Bull. Dept. Secondary School Principals* **22,** No. 77 (Nov. 1938) pp. 3–10.

Among the problems which deserve careful consideration is the great need for a comprehensive, well-rounded, and fundamentally justified educational program in which there is articulation of the work of the secondary school and college. Several lines of procedure which may help in the solution of the problem are suggested.—M. W.

Trends in the junior high school curriculum, F. G. MACOMBER. *Bull. Dept. Secondary School Principals* **22,** No. 77 (Nov. 1938) pp. 11–18.

A discussion of the trends in the junior high school curriculum and some of their implications. It is important to realize that the junior high school curriculum is affected by the same psychological, philosophical, and social considerations which today make all institutions of the public school system dynamic factors in the development of well-integrated individuals and in the improvement of the social order.—M. W.

New patterns for junior college curricula, R. C. INGALLS. *Bull. Dept. Secondary School Principals* **22,** No. 77 (Nov. 1938) pp. 19–25.

The junior college has developed rapidly during the past 10 years, and indications point to the probability of continued growth because it meets the educational needs of many people. Six patterns essential for semiprofessional courses and curricula are discussed, along with certain factors which will aid in establishing and extending the junior college.—M. W.

Childhood's middle age. *Progressive Educ.* **15,** No. 7 (Nov. 1938) pp. 519–563.

A series of reports of studies which deal with the "middle period" of childhood, from 8 to 12 years of age [see page 189].—S. M. B.

Some general characteristics of adolescence, C. B. ZACHRY. *Progressive Educ.* **15,** No. 8 (Dec. 1938) pp. 591–597.

The secondary school, which traditionally neglects the adolescent's nature and needs in favor of the preoccupations of advanced scholars or the demands of an acquisitive so-

ciety, reflects the way in which American culture as a whole jeopardizes personal and social values by ignoring the new perplexities and special potentialities of adolescence. Strains, which adolescents have, deriving from various developmental and social causes, are cited for consideration in secondary school education. This article includes excerpts from a forthcoming publication of the Commission on Secondary School Curriculum of the Progressive Education Association.—S. M. B.

How can we use the insight of youth, A. V. KELIHER. *Progressive Educ.* **15,** No. 8 (Dec. 1938) pp. 598–604.

A recognition of the necessity for giving support to and opportunities for the expression of the creative insight which is revealed as a part of youth's thinking. Some accounts are given of insight shown during discussions with high school students following the showing of a film as a part of the Motion Picture Project of the Commission on Human Relations.—S. M. B.

The immediate social relations of the students in junior and senior high schools, L. H. MEEK. *Progressive Educ.* **15,** No. 8 (Dec. 1938) pp. 610–616.

An article based on the report of the Committee on Immediate Social Relations of the Commission on Secondary School Curriculum of the Progressive Education Association. "We can expect then that children by and large in junior and senior high school will consciously strive to be like their group and to become desirable in the eyes of the boys and girls with whom they associate. But each will achieve this goal only in relation to the interaction of other compelling forces from home, school and society upon his changing personality."—S. M. B.

SUPERVISION AND TEACHER TRAINING

In-service training of secondary teachers in Minnesota, C. P. ARCHER. *Bull. Dept. Secondary School Principals* **22,** No. 77 (Nov. 1938) pp. 43–48.

The Minnesota Secondary School Principals' Association, through its committee on the education of teachers, has surveyed the practices used for in-service training and offers suggestions as to desirable techniques for this important function of superintendents and principals.—M. W.

Cultural contacts for teachers, L. A. LAMOREAUX. *Curric. J.* **9,** No. 7 (Nov. 1938) pp. 327–328.

In one college the program of teacher-training in service deals with the development and understanding of the curriculum. The mingling of the cultures in the community is studied by making contacts with the Americanization Service, adult classes, a neighborhood house, and leads given by individuals. Each culture group uses a large room in the library to build up an exhibit of its treasures. During the evening Americans native to that culture give short talks, folk dances and songs, supplying teachers with the information desired. A card catalog in the central office records names of speakers and treasures in order that teachers and classes may have access to them later.—R. V. H.

Should teachers be certified on credits earned or as the result of examinations? P. W. L. COX. *Educ. Digest* **4,** No. 1 (Dec. 1938) pp. 47–49.

A discussion of "some of the important reasons why most educators would prefer examinations if a feasible system could be developed."—M. W.

Democratic and creative supervision in principle and in practice. Parts I and II, E. J. CALVERT. *Educ. Method* **18,** Nos. 2 and 3 (Nov. and Dec. 1938) pp. 54–60, 100–105.

In Part I, it is shown that the task and nature of creative supervision makes provision for individual differences of teachers, improves the teaching-learning situation through co-operative enterprises, and provides for the creative growth of pupils, teachers, and supervisors alike. Sixteen qualifications and characteristics of a creative supervisor are presented, and possible democratic supervisory services and devices used by such supervisors are discussed.

In Part II, the type of supervision that has prevailed in the past is compared with that

frequently found in the present. Despite great variation, supervision is slowly changing toward the creative practices discussed in Part I.—R. V. H.

The teacher's major opportunity, J. E. MORGAN. *J. Natl. Educ. Assocn.* **27,** No. 7 (Oct. 1938) p. 193.

Emphasis in this editorial is on the major responsibility of teachers to create conditions under which the awakening of the self of each individual may take place. This is basic because it includes all lesser motives for both education and personal living. Attainment of this objective involves personal interest in each student as an individual and the awakening of the teacher himself.—S. M. B.

Ways to improve the professional status of teachers, C. W. KNUDSEN. *Peabody J. Educ.* **16,** No. 2 (Sept. 1938) pp. 91–97.

Selection of teachers, preparation, certification, placement, in-service growth, and professional organizations are discussed as methods by which the professional status of teachers may be raised. Among the special points made are: A life interest in teaching is needed. Criticism of the manner in which the best type of teacher helps a child to overcome a difficulty should be carefully avoided. Placement bureaus must become increasingly sensitive to their responsibility for raising the professional status of teachers and must discourage ill-fitted persons from enrolling. Continuing growth after graduation needs to include reading and study, summer school, and travel.—A. L.

Supply and demand of home economics teachers. *School Life* **24,** No. 4 (Jan. 1939) pp. 120–121.

Report of a study of supply and demand of home economics teachers over the 5-year period 1932–37 made by the U. S. Office of Education. The study indicates that in 66 per cent of the situations reported the supply of teachers was less than the demand and that the number of graduates in home economics from teacher-training institutions who go into teaching far exceeds the number who go into other occupations. These and other data reported are important to the institution and to the prospective teacher and are further discussed in Miscellaneous Publication No. 2104 issued by the Vocational Division of the Office of Education.—S. M. B.

Trends in certification of teachers, B. W. FRAZIER. *School Life* **24,** No. 4 (Jan. 1939) pp. 123–124.

A study of trends in the certification of teachers in all states since 1921. The most important trend appears to be the rise in minimum scholastic requirements.—S. M. B.

FOOD ECONOMICS AND DIETARY REQUIREMENTS

Contributed by the staff of the Food Economics Section, Bureau of Home Economics, United States Department of Agriculture

Development of quick-frozen food industry, A. R. FISHER. *Butchers' Advocate* **104,** No. 25 (Dec. 21, 1938) p. 25.

During the last 8 years there has been a tremendous increase in the volume of frozen foods. According to the U. S. Bureau of Foreign and Domestic Commerce, the quantity in 1937 was over 273,000,000 pounds and was expected to reach 480,000,000 in 1938. Of the total quantity marketed in 1937, 36 per cent was meat, poultry, and fish; 40 per cent, fruits; and 24 per cent, vegetables. Peas are the most popular single item. From the standpoint of preserving flavor and form, the greatest success of quick freezing is found with vegetables. Among the recent developments in the industry are the preparation and quick freezing of fish aboard the trawlers from which they are caught and the quick freezing of Long Island ducklings at or near the source of production.

More than 200 varieties of sausage. *Butchers' Advocate* **104,** No. 25 (Dec. 21, 1938) p. 27.

Sausage and ready-to-serve meat represent one of the most important groups of food products produced by the livestock and meat industry. It is estimated that one out of twelve pounds of meat derived through dressing livestock is consumed in the form of sausage. In the United States more than 200 varieties are manufactured. These include frankfurters, bologna, liver puddings, and the like. More than 1,333,000,000 pounds a year are manufactured for consumption at an estimated value of $237,000,000.

Food of the present-day Maya Indians of Yucatan, F. G. BENEDICT and M. STEGGERDA. *Contributions to Am. Archaeol.* **3,** No. 18, Carnegie Institution of Washington Publ. 456, 1937.

This study was undertaken partly to determine whether the high basal metabolism of these people could be attributed to their diet, and partly to throw light upon the probable dietary customs of the Maya of prehistoric times. The most commonly used foods of today and doubtless of ancient times are maize, beans, squash, chili, and native meat. The canned or packaged foods brought in from the United States have as yet reached but a small proportion of the people. Records of the food consumed by a number of men, together with the results of chemical analysis of individual foods and composite samples of meals eaten, show a diet in which 17 per cent of the total calories were from protein, 13 per cent from fat, and 70 per cent from carbohydrate. About three fourths of the daily energy intake came from maize. For the individuals studied, the average daily protein intake averaged 74 gm., a low rather than high intake. The average energy value of the diets was 2565 calories, which is low in comparison with the average for American laborers. Measurements of energy intake gave figures only about 66 per cent above the measured basal heat production. This suggests the muscular activity of the men cannot be excessive. The higher basal metabolism of these people must therefore be ascribed to some factor other than a high protein diet, an excessive calorie intake, or the after-effect of severe muscular exercise.

Utilization of skim milk and buttermilk, KIEFERLE and W. LIEBSCHER. *Dairy Ind.* **111,** No. 1 (Jan. 1938) pp. 3–6.

The utilization of the residues of the dairy industry is a problem of considerable moment in many countries. In most countries, utilization tends toward industry and agriculture, although the potential value of these products as food for human beings is recognized. In this report are described the attempts being made in Germany, France, Italy, and other countries to use skim milk and buttermilk to best advantage.

Consumption of eggs in farm homes in certain districts of Canada, W. C. HOPPER. *Econ. Annalist* **8,** No. 3 (June 1938) p. 46.

As a part of the survey on milk and cheese consumption conducted in certain areas in

Canada in 1935–36, data on egg consumption were obtained from 320 farm families in 5 rural districts. The average yearly per capita consumption for each locality is as follows: for Southern Ontario County and Southern Hastings County, Ontario, 28 and 26 dozen respectively; for the Island of Orleans and the County of Quebec, Quebec, 13 and 12 dozen respectively; and for the Calgary-Claresholm district, Alberta, 46 dozen.

Declining cereal food consumption and some of the causes. [From an address by Alonzo E. Taylor before the recent annual convention of the American Bakers Association]. *Northwestern Miller* **196,** No. 4 (Nov. 9, 1938) p. 7.

The per capita consumption of wheat flour or its equivalent in bread is estimated to be about 154 pounds a year. This represents a decline of about 50 pounds per person per year in less than 30 years. This reduction may be attributed to (1) a decline in the total energy value of average diets, (2) the supplanting of wheat with other foodstuffs, and (3) the relinquishment of wheat due to particular reasons for avoiding it. With the depression there was a sharp fall in per capita absorption from an average of about 176 pounds for the 4-year period 1925–29 to 154 pounds for the year 1933–34. This decline has been greater in urban than in rural communities. The use of corn has declined heavily and that of oats and rye slightly. Other foods showing a decline in annual per capita use are dried legumes, lard and salt pork, potatoes, and apples, all staples in the pioneer diet. On the other hand, there have been increases in the consumption of sugar, milk, butter, cheese, poultry, eggs, and many fruits and vegetables. The greater freedom in purchasing power within recent years, together with the greater variety of available foods now on the market, have brought about these shifts in consumption trends. Psychological and aesthetic considerations influence the diet as much as physiological components.

A physiological study of the diets of 15 rural workers' families in Essex, L. S. FRY and M. S. MYERS. *Pub. Health* **51,** No. 12 (Sept. 1938) pp. 358–362.

Records of all the food brought into the house were kept for 4 weeks in November and January by 15 families in a rural part of Essex [England]. Average family income was £2,5s. a week. The diets furnished per man per day 3,744 calories, 93 gm. of protein, 113 gm. of fat, and 572 gm. of carbohydrate. The calcium content of the diets averaged 0.57 gm. per capita per day, whereas the estimated need was 0.94 gm. Phosphorus and iron were usually adequately supplied, according to the dietary allowances suggested by Stiebeling. The diets furnished an average of 2,217 i.u. of vitamin A, with a range for different families of from 735 to 3,820 units per person per day; an average of 447 i.u. of vitamin B (range, 321 to 682); 31.4 mg. of ascorbic acid (range, 14.7 to 54.0); and 43 i.u. of vitamin D (range, 9 to 108) per person per day. The comparatively high intake of vitamin C was attributed to the large consumption of potatoes.

Food consumption of farm families in the lower coastal plains, A. M. MOSER. Fiftieth Ann. Rept. S. C. Expt. Sta. (Dec. 1937) pp. 20–22.

This preliminary report of a study of the diets of farm families in certain sections of South Carolina gives data on the money value of the food consumed. Of the 214 white families studied, slightly over half had food supplies valued at from 62 cents to $1.85 per person per week, while for most of the remaining families the money value was between $1.86 and $3.10. Over half of the 183 negro dietaries were valued at less than $1.24 per person per week and only about a tenth at more than $1.85. Home-produced foods play an important role in these dietaries, accounting for 68 and 55 per cent of the money value of the diets of the modal group of white and negro families respectively. As the per capita money value of negro diets increased, there was a corresponding increase in the percental as well as the money value of home-produced foods. This proportionate increase was not observed in the case of white families.

Diets of families of employed wage earners and low-salaried clerical workers in cities, H. K. STIEBELING and E. F. PHIPARD. U. S. Dept. Agr. Circ. 507 (1939) 141 pp.

This analysis of expenditures for food, the weight of different kinds purchased, and the nutritive adequacy of diets of a relatively well-to-do population group is based on about 4,000 records covering 1 week each, obtained during the period December 1934 to February 1937, in 43 industrial centers in 8 major geographical regions of the United States. Most of the records were obtained from white families; some, however, were also obtained from negro families in Middle Atlantic and Southern cities.

Median food expenditures of white families ranged from $2.10 a person a week in East South Central cities to $2.85 on the Pacific Coast; of negro families, from $1.55 a person a week in Southern cities to $2.40 a person a week in Middle Atlantic cities.

Rising expenditures for food meant in each region increased purchases of nearly all kinds of food. The increments were most pronounced in the case of milk, butter, cream, eggs, meat, fruits, and succulent vegetables, and least for grain products, sugars, and fats other than butter and cream. The average consumption of 36 important foods or groups of foods is given for families in each region by level of food expenditure and by season. For 4 regions, averages not only of 36 food groups but also for 235 individual items are also presented for combined seasons and expenditure levels.

The nutritive value of the food as brought into the house for family consumption was computed on both a per capita and a nutrition-requirement unit basis.

Were the white families represented by this study arrayed according to the content of their diets in respect to each of the nutrients, it is estimated that the middle 50 per cent would receive, per requirement unit per day, between 70 and 95 gm. of protein; 0.50 and 0.83 gm. of calcium; 14 and 17 mg. of iron; 2,000 and 4,500 i.u. of vitamin A, 400 and 600 i.u. of vitamin B_1, 50 and 100 mg. of ascorbic acid, and 550 and 900 Sherman units of riboflavin.

The diets of families in different regions were classified as good, fair, or poor, according to their nutritive content per requirement unit. Above a certain minimum and below a rather high maximum level of expenditure of food, all grades of diet were found regardless of expenditure; but the percentage that fell in the higher grades increased with rising expenditures for food. From 40 to 60 per cent of the diets of white families in the 4 regions from which most extensive data were obtained were found to be in need of improvement, and over 60 per cent of the diets of negro families in the South were in this class.

The consumption of dairy products in Burlington, Vt., 1935–36, H. B. ELLENBERGER and J. T. STEARNS. Vt. Agr. Expt. Sta. Bull. 433 (May 1938) 39 pp.

The consumption of milk and other dairy products in Burlington, Vermont, in 1935–36 was determined by a house-to-house survey. Of the 3,616 families included in the study, 95 per cent reported the purchase of fresh milk; 35 per cent, of canned milk; 57 per cent, of heavy cream; 91 per cent, of butter; 14 per cent, of butter substitute; and 62 per cent, of cheese. Average weekly per capita consumption figures for all families were as follows: fresh milk, 3.74 pints; canned milk, 0.3 tall can; heavy cream, 0.34 half pint; butter, 0.57 pound; butter substitute, 0.09 pound; and cheese, 0.13 pound. As family size increased, the per capita consumption of milk decreased. With increasing income, the consumption of milk, cream, and butter rose, but the consumption of butter substitute declined somewhat. Income had little effect on the quantities of cheese consumed among families reporting use of this food. The report furnishes detailed information concerning various phases of fluid milk consumption, including grades and kinds of milk purchased, frequency of milk drinking by age and nationality groups, reasons for increasing or decreasing the milk supply, and reasons for using canned milk.

E. F. P. and H. K. S.

NUTRITION

Contributed by the staff of the Office of Experiment Stations, United States Department of Agriculture

Protein and Mineral Metabolism

The biological value of milk and egg protein in young and mature rats, E. E. Sumner. *J. Nutr.* **16,** No. 2 (Aug. 10, 1938) pp. 129–139.

The biological value of dried whole egg protein was 97 in young rats and 85 in mature rats as compared to 84 and 64, respectively, for dried whole milk fed at a level of 8 per cent. When the mature rats were fed at the 5 per cent level the biological value of both egg and milk proteins was increased. There was no difference between the absorption of the protein from the two sources. It would appear that the protein requirement for growth in young rats is higher than for maintenance in adult rats.

The biological value of milk and egg protein in human subjects, E. E. Sumner and J. R. Murlin. *J. Nutr.* **16,** No. 2 (Aug. 10, 1938) pp. 141–152.

The biological value of dried whole egg protein for maintenance in four adult human subjects was 65 as compared to 62 for dried whole milk powder fed at a level of 3 to 4 per cent of the total caloric value of the diet. The egg and milk proteins were about equally well utilized, having true digestibility values of 92 and 90, respectively.

The egg-replacement value of several proteins in human nutrition, E. E. Sumner, H. B. Pierce, and J. R. Murlin. *J. Nutr.* **16,** No. 1 (July 10, 1938) pp. 37–56.

Ten healthy adult subjects were given during different test periods egg, milk, milk and yeast, egg and yeast, and wheat endosperm as the sources of protein in carefully selected diets. Using the egg protein as a standard, the milk protein was lower in its ability to maintain nitrogen balance and the substitution of yeast for part of the milk or egg protein lowered the replacement value below that of milk or egg alone. Wheat endosperm supplemented by a small amount of cream was able to replace egg nitrogen as well as milk. The apparent digestibility coefficients are between 81 and 79 for egg, wheat endosperm, and milk proteins.

The egg-replacement value of the proteins of cereal breakfast foods, with a consideration of heat injury, J. R. Murlin, E. S. Nasset, and M. E. Marsh. *J. Nutr.* **16,** No. 3 (Sept. 10, 1938) pp. 249–269.

Representing the extent to which the cereal proteins absorbed replaced egg protein in the metabolism of 10 adult men, precooked whole grain oats had an average replacement value of 87, wheat endosperm 72, granulated wheat containing the germ 70, torn wheat 68, toasted "whole" wheat 64, flaked wheat 63, and inflated wheat 57. Whole grain oats also had the highest biological value, a measurement which does not take account of differences in alimentary waste from the body, followed in order by torn wheat, toasted whole wheat, granulated wheat with germ, flaked and inflated wheat cereals, and wheat endosperm. The lower rank of the flaked and inflated whole wheat cereals is believed to be due to the high heat to which they are subjected in the manufacturing process.

The influence of diet on the nitrogen balances of pre-school children, J. E. Hawks, M. M. Bray, and M. Dye. *J. Nutr.* **15,** No. 2 (Feb. 10, 1938) pp. 125–143.

Five children receiving constant diets containing 3 gm. of protein per kilogram of body weight excreted between 92.4 and 94.6 per cent of the nitrogen intake. When the protein intake was increased to 4 gm. per kilogram the total nitrogen excreted was from 90.1 to 93 per cent. All of the children showed better weight gains on the high protein diet than on the medium protein diet and were in a fair degree of nitrogen equilibrium during the latter part of the test period.

Nitrogen, calcium and phosphorus balances of rural adolescent boys on low cost diets, L. C. Kung and H. L. Yeh. *Chinese J.*

Physiol. **13,** No. 3 (Sept. 30, 1938) pp. 285–305.

Metabolism experiments were conducted on 14 healthy adolescent boys maintained on test diets containing various cereal fractions as the source of protein and typical of the low-cost diets of North China. The diet containing bread made with wheat flour had an apparent digestibility coefficient of 89 per cent, which was lowered to 62 when the bread was made with a mixed flour consisting of soybean, kaoliang, and millet, with sweet potatoes also added to the diet. The replacement of only part of the wheat flour by the mixed flour, with the addition to the diet of small amounts of meat, cabbage, bean curd, and spinach gave a digestibility coefficient of 70 per cent. The retention of nitrogen averaged 2.9 gm. per day on intakes between 16.85 and 17.21 gm. and was lowest when the boys were eating the diet containing mixed flour bread and sweet potatoes. The calcium retention on intakes between 0.929 and 1.508 gm. averaged about 0.4 gm., which was increased approximately one and one-half times when the diet contained additional vegetables. The retention of phosphorus was about 2 gm. per day regardless of the phosphorus intake, which varied between 3.247 and 4.095 gm.

Animal products as sources of protein, calcium, and phosphorus in the human diet, M. M. KRAMER and I. GILLUM. *J. Am. Dietetic Assocn.* **14,** No. 4 (April 1938) pp. 256–260.

When they were eating freely chosen diets the daily protein intake of 23 college women averaged 64.8 gm., with only 6 attaining the suggested standard allowance of 70 gm. The allowance of 0.68 gm. of calcium was not reached by 3 subjects, and 14 were below the 1.32 gm. allowance for phosphorus. When milk and cheese were omitted from the diets, only 6 subjects exceeded the protein allowance and 7 were below the calcium and 1 below the phosphorus allowance. Upon the withdrawal from the diet of all high protein foods of animal origin none of the subjects received standard amounts of protein, calcium, or phosphorus.

Protein adequacy for college students, V. R. GODDARD and H. R. MORGAN. *J. Am. Dietetic Assocn.* **14,** No. 4 (April 1938) pp. 251–255.

The albumin-globulin ratio of the blood serum remained within the normal range and showed no tendency to vary in direct relation to the protein intake of 8 college students who were consuming between 36 and 57 gm. of protein daily, or from 0.6 to 0.9 gm. per kilogram of normal body weight. The most consistent observation made upon the low protein subjects was that their metabolic rates were low in comparison with those of 13 college students with protein intakes between 58 and 120 gm. or from 0.93 to 1.52 gm. per kilogram of normal body weight.

Effect of addition of calcium on the biological value of the proteins of Indian diets, V. RANGANATHAN and Y. V. S. RAU. *Nature* [London] **142,** No. 3586 (July 23, 1938) p. 165.

A typical Madras diet, with rice as the major item and a calcium content of 0.124 per cent, gave a protein biological value of 44 per cent and a digestibility value of 64 per cent. When 2 per cent calcium carbonate was added to the diet the biological value of the protein increased to 76 and the digestibility value to 89 per cent. It is thought that the lower biological value of the protein in the first instance may have been due to the non-availability of the calcium of the diet.

The availability of calcium in vegetable food materials, L. C. KUNG, H. L. YEH, and W. H. ADOLPH. *Chinese J. Physiol.* **13,** No. 3 (Sept. 30, 1938) pp. 307–315.

By feeding tests with rats maintained on a basal diet similar to the cereal diet of North China, the amounts of available calcium in a number of commonly used vegetables was determined. The calcium of celery cabbage was retained in the body of the rats to the extent of from 95 to 99 per cent, Chinese cabbage (Brassica sp.) 96 to 100, coriander 92 to 96, rutabaga leaves 82 to 100, turnips 86 to 89, leeks 82 to 84, soybean sprouts 53 to 62, and spinach 15 to 21 per cent. Sautéing or steaming the spinach did not appreciably lower the calcium retention value.

The availability of calcium from Chinese cabbage (Brassica pekinensis, Rupr.), H. C. KAO, R. T. CONNER, and H. C. SHERMAN. *J. Biol. Chem.* **123,** No. 1 (March 1938) pp. 221–228.

In feeding tests with rats, Chinese cabbage proved to be an excellent source of calcium, having an available calcium content approximately nine tenths that of whole cow's milk.

The effect of body stores on the efficiency of calcium utilization, K. V. ROTTENSTEN. *Biochem. J.* **32,** No. 8 (Aug. 1938) pp. 1285–1292.

From the results of an experiment made on rats receiving a diet containing amounts of calcium varying from far below to far in excess of the requirement for maximum storage with an adequate amount of phosphorus during different test periods, the author concludes that the degree of calcium saturation has an effect on the efficiency of calcium utilization, the efficiency being greater with depleted than with replenished stores of body calcium.

The counteraction by fat of the anticalcifying action of cereals, E. J. MCDOUGALL. *Biochem. J.* **32,** No. 1 (Jan. 1938) pp. 194–202.

Evidence is presented that the rachitogenic action of cereals as demonstrated by Mellanby is due to a deficiency of fat in the diet. Rats maintained on the fat-free high cereal diet containing either white flour or white bread developed rickets. The addition to the diet of vitamin D-free lard promoted growth and protected the rats from rickets. It is suggested that the absorption of calcium is promoted by the formation of calcium soaps with the fatty acids present in the fat supplements. In the absence of fat the calcium combines with the phytin to form an insoluble compound which is not absorbed in the intestine of the rat.

The relative effects of certain saccharides and of vitamin D on mineral metabolism of rats, J. OUTHOUSE, J. SMITH, and I. TWOMEY. *J. Nutr.* **15,** No. 3 (March 1938) pp. 257–268.

Rats maintained on a test ration containing lactose had greater retentions of calcium, phosphorus, and magnesium than did rats on rations containing starch and sucrose. With the exception of magnesium, rats receiving a ration with cod-liver oil had retentions equal to those of the lactose-fed rats. No relationship could be demonstrated between bone-ash values and the mineral retentions of the test rats, but correlations were found for the group of normal control rats for both calcium and phosphorus. It is concluded that the calcification induced by the vitamin D was the result of a stimulation to the storage of both calcium and phosphorus, whereas the calcification induced by the ingestion of lactose was due primarily to calcium.

Effect of a milk supplement on the physical status of institutional children. I. Growth in height and in weight, L. J. ROBERTS, R. BLAIR, B. LENNING, and M. SCOTT. II. Ossification of the bones of the wrist, V. MCNAIR and L. J. ROBERTS. III. Progress of dental caries, L. J. ROBERTS, S. ENGLEBRECHT, R. BLAIR, W. WILLIAMS, and M. SCOTT. *Am. J. Diseases Children* **56,** No. 2 (Aug. 1938) pp. 287–300; No. 3 (Sept. 1938) pp. 494–509; No. 4 (Oct. 1938) pp. 805–823.

In the first study the children's physical status was followed by monthly measurements of height and weight and at the beginning and end of the year by the application of the Franzen indexes of nutrition and the Lucas-Pryor-Stolz width-length index. By all methods of comparison, the growth of 72 children receiving 1 pint equivalent daily of either irradiated or nonirradiated milk exceeded that of 36 children receiving the regular institutional diet without additional milk. When the children were placed in matched trios for comparison, the weight gains of the group receiving nonirradiated milk were best in 46 per cent, of the vitamin D-milk group in 42, and of the group receiving no milk supplement in 12 per cent of the trios. The height gains were in the same order but were less marked. Differences in actual consumption of milk are suggested as an explanation for the slightly more favorable results obtained for the nonirradiated milk group.

In the second study the bone development of the children was followed by roentgenograms taken at the beginning and end of the year.

The stage of ossification of the wristbone, as determined by the chronological age and the application of the Flory inspectional age scale and the Carter index, was greater in the children receiving the milk supplements than in those receiving no additional milk. The mean advantage of the children in the milk groups was 2.7 points, which is a statistically significant difference, amounting in terms of growth to over one third of the year's quota of expected gain in bone development.

In the third study dental examinations were made on the teeth of 144 of the children at the beginning of the experimental year and of 106 children remaining in the institution at the end of the year. By the application of a seven-point rating scale which expresses the degree of decay numerically and from the roentgenograms and the dentists' findings, there was a consistent tendency for the progress of caries in the groups receiving the milk supplements to be slightly less than in the groups receiving no additional milk, but the differences were too small to be of either statistical or practical significance.

Effect of vitamin B_1 on the iron retention of a normal infant, F. W. SCHLUTZ, H. OLDHAM, and M. MORSE. *Am. J. Diseases Children* **56**, No. 4 (Oct. 1938) pp. 735–743.

A 7-month-old infant receiving a diet containing about 10 i. u. of vitamin B_1 and supplemented by 0.1 mg. of copper and from 0.42 to 1.32 mg. of iron per kilogram of body weight per day retained less iron when given 90 to 126 additional units of vitamin B_1. The hemoglobin content of the blood remained within the normal range of from 12 to 14 gm. per 100 cc. during the 8-month test period. While the high vitamin B_1 intake tended to have an unfavorable influence on the iron balance of the infant, it did not affect the retention of calcium.

Radioactive iron and its metabolism in anemia, P. F. HAHN, W. F. BALE, E. O. LAWRENCE, and G. H. WHIPPLE. *J. Am. Med. Assocn.* **111**, No. 25 (Dec. 17, 1938) pp. 2285–2286.

The oral administration of iron as ferric chloride or sulfate to 4 dogs maintained on a diet low in iron and kept anemic by frequent bleeding resulted in abundant absorption of the iron and a rapid appearance of the mineral in the red blood cells and plasma. Three normal dogs with well-filled iron stores absorbed the supplementary iron only in traces. It would appear that in these experimental dogs the absorption of iron was dependent on the needs of the body for iron.

The absorption and excretion of iron following oral and intravenous administration, R. A. MCCANCE and E. M. WIDDOWSON. *J. Physiol.* **94**, No. 1 (Oct. 1938) pp. 148–154.

In the first stage of an investigation carried out on 6 normal men and women, the daily food intakes supplied between 5.9 and 8.6 mg. of iron. During the 14-day test period all of the subjects were in iron balance. In the second stage the food intakes of iron were supplemented by medicinal iron in the form of a ferric ammonium citrate preparation to raise the total intakes to between 12 and 16 mg. The subjects excreted all of the supplementary iron and remained in iron balance. In the third stage the daily food intakes contained from 7.6 to 11.7 mg. of iron and were supplemented by 7 mg. of the medicinal iron injected intravenously each day for 14 days. The amount of iron excreted in the feces was in all subjects close to the amount in the food. Since the small amount of iron excreted in the urine, approximately 1.4 per cent of the amount injected, probably took place while the injection was being made and before the injected iron had been removed from the plasma, it is not considered to be of any practical importance. When the injected iron is not considered, all of the subjects were in iron balance. Therefore, within the limits of experimental error none of the injected iron was excreted by the gastrointestinal tract. Since the subjects were in iron equilibrium before the test and were fully saturated with iron up to normal capacity, the injected iron should have been excreted into the gut in reasonably large amounts if the gut plays any real part in regulating the amount of iron in the body. The results are entirely in agreement with the new theory according to which the capacity of the body to excrete iron is strictly limited and probably negligible.

M. A. D.

MISCELLANY

Homemaking Education for Adults. Mary S. Lyle and Rua Van Horn are the authors of "Homemaking Education Program for Adults," issued recently as U. S. Department of the Interior, Vocational Education Bulletin No. 195 (Home Economics Series No. 22). It is on sale by the Superintendent of Documents, Washington, D. C., for 15 cents a copy.

"Stories for Parents." Teachers and social workers as well as parents themselves will welcome the Child Study Association of America's new series of simple leaflets for parents with limited background. The first four are by Jean Schick Grossman and are thus listed: "A Game of Jacks," a discipline situation; "A Promise," on keeping one's word to children; "A Happy Day for the Family," on encouraging children's success; "Dad Comes Home," a typical "hard times" situation in the home. Each leaflet presents its situation, asks leading questions about meeting it, suggests "some things to think about." The price of the leaflets is 5 cents each; the address for orders, Child Study Association of America, 221 West 57th Street, New York City.

Visual Aids to Education. The bulletin "School Use of Visual Aids" carries the subtitle "An Interpretative Study of the Data Collected in the National Survey of Visual Instruction in Elementary and Secondary Schools." The author is Cline M. Koon, and the official description is U. S. Department of the Interior, Office of Education Bulletin 1938, No. 4.

"Motion Pictures and Visual Education" is the title of a bulletin published by the National Congress of Parents and Teachers in which the effects of motion pictures on children are discussed. Suggestions are made about judging them, and also what parents can do to obtain better motion pictures at neighborhood theaters.

The *News Letter* published by the Bureau of Educational Research, Ohio State University, Columbus, is a godsend to anyone who wishes to keep informed about educational use of motion pictures and radio. The following items are taken from the January issue: The Association of School Film Libraries, 9 Rockefeller Plaza, New York City, is financed by the General Education Board, and as the first step in its program it is compiling and publishing an evaluated list of available films. The College Film Center, 59 East Van Buren Street, Chicago, is a new nonprofit agency for the distribution of school- and teacher-produced educational films adapted to senior high school and higher levels; a catalog is available. The U. S. Film Service of the National Emergency Council, Washington, D. C., will send free on request information about films produced and distributed by the federal government and also a film bibliography.

Housing. The newsletter sent to members by the National Association of Housing Officials has grown from an occasional mimeographed sheet to the regular planographed "NAHO News." Among the items in the issue for December 15 is one about civil service positions for which examinations have recently been held by the Detroit Housing Commission, including one for a housing manager at a salary of $4,200; in scoring, 30 per cent each was allowed for a written test of knowledge of the subject, for character and personality, and for education and training, and 10 per cent for experience.

"Slums and Blighted Areas in the United States," the bulletin which Edith Elmer Wood prepared in 1935 for the Housing Division of the P. W. A. and of which two printings have been exhausted, has now been reissued because its fundamental information is still so pertinent and timely. It may be obtained free on request to the U. S. Housing Authority, Washington, D. C.

Scottish Magazine of Domestic Science. Readers of Miss Hunter's article in the JOURNAL for September 1938 will be interested in the *Home Economic Magazine* published twice a year by the Domestic Science Section of the Educational Institute of Scotland. Volume 2, No. 2, which appeared in April 1938, contained descriptions of several Scottish institutions of interest to home economists and other articles

and notes reflecting the interests and activities of Scottish home economists. The use of color on the cover is pleasantly suggestive of the JOURNAL OF HOME ECONOMICS.

Population Trends. The report made to the National Resources Committee by its committee on population problems is a large volume of over 300 pages entitled "The Problems of a Changing Population." Among the 9 sections are those on "The Trend of Population: Economic Aspects," "Regional Distribution of Economic Opportunity," "Physical Characteristics and Biological Inheritance," "Health and Physical Development," "Social Development and Education," "Cultural Diversity in American Life." The report is purchasable for 75 cents from the Superintendent of Documents, Washington, D. C.

"Biological Abstracts." The board of editors announces that because of the increasing amount of material to be included, this summary of scientific articles will hereafter be published in five sections. The annual subscription for single sections will vary from $6 to $9, while that for the entire journal will be $25.

Heigh, ho! Come to the Fair. Alongside the estimate of the number of babies who may be expected to get their first glimpse of the world on the grounds of the New York World's Fair, the releases now enable us to place the calculation that visitors to California's World Fair will probably eat 2,880,000 pounds of hot dogs, which if laid end to end would reach 273 miles.

"Our Cereals." Mary Swartz Rose and Bertlyn Bosley are the authors of this "nutrition unit for the fourth, fifth, and sixth grades of the elementary school" published by the Bureau of Publications, Teachers College, Columbia University, New York City. The unit is planned for use without special equipment, and its preparation was made possible by a grant from the Sheffield Farms Company.

Simplifying Names of Colors. A scientific classification of colors undertaken at the request of the American Pharmaceutical Association is nearing completion, according to a report which Dr. Deane B. Judd of the National Bureau of Standards recently made to the Optical Society of America and which was briefly noted in *Science News Letter* for November 12. A few hue names and eight adjectives together are expected to designate accurately 320 colors.

Buying Life Insurance. "Life Insurance from the Buyer's Point of View," prepared for the American Institute for Economic Research by E. C. Harwood and Bion H. Francis, is based on sections of the Institute's longer volume "Life Insurance and Annuities from the Buyer's Point of View." It explains the whys and hows of life insurance for the ordinary person, and gives sensible advice about choosing types, companies, and salesmen. The pamphlet may be purchased for $1 from the Institute, 1200 Massachusetts Avenue, Cambridge, Massachusetts.

Research in the Federal Government. Dr. Briggs, director of the National Bureau of Standards, has analyzed the federal budget for 1938. His findings as quoted in *Science News Letter* for November 19 show that 39 per cent of the $57,700,000 for research goes to natural sciences, mainly agricultural; 36 per cent to engineering, mainly national defense; 16 per cent to surveys and mapping; 5 per cent to public health; and 4 per cent to physical sciences.

"Science Advances in 1938." *Science News Letter* for December 24 used 5 full pages of fine type for its closely summarized and carefully classified statements of the principal scientific discoveries of 1938. Items of interest to home economists are found under biological science, chemistry, physics, medical science, and psychology-psychiatry.

Potatoes and Puddings. To the German housewife the initials DPM (Deutsches Puddingmehl) stand for a form of potato starch or meal devised to lessen the use of imported goods in puddings and thickening and to substitute the German-grown potato.

Vocations. The nurse, the dental mechanic, the stenographic worker, and the musician are subjects recently added to the list of bulletins in which the National Occupational Conference gives "an appraisal and abstract of available literature." They are on sale for 10 cents each at 551 Fifth Avenue, New York City.

The first number of the *Vocational Guide*, a monthly "index to current occupational information," was published in December by Science Research Associates, 600 South Michigan Avenue, Chicago, Illinois. It includes 127 classified annotations, printed on one side of the paper only. Subscription price is $4 a year. The organization also publishes the bimonthly magazine *Vocational Trends* and monthly occupational monographs. Its advisory council includes leaders in the educational and vocational fields.

Budgets and Wages. "Factors to Be Considered in Preparing Minimum-Wage Budgets for Women" is a 46-page bulletin which was prepared jointly by Gertrude Schmidt Weiss and Marie Waite of the Bureau of Home Economics, U. S. Department of Agriculture, and by Louise Stitt of the Women's Bureau and Stella Stewart of the Bureau of Labor Statistics, U. S. Department of Labor. It is issued as Miscellaneous Publication No. 324 of the U. S. Department of Agriculture. "The Effect of Minimum-Wage Determinations in Service Industries" deals with adjustments in the dry-cleaning and power-laundry industries and appears as U. S. Department of Labor, Bulletin of the Women's Bureau, No. 166.

Public Affairs Pamphlets. Recent additions to this series are "Machines and Tomorrow's World," in which William F. Ogburn summarizes "Technological Trends and National Policy," a report of the National Resources Committee; "How Good Are Our Colleges?" prepared by Goodwin Watson on the basis of a study by the Carnegie Foundation for the Advancement of Teaching; "Who Can Afford Health?", Beulah Amidon's summary of the National Health Survey; and "Our Taxes—and What They Buy," which Maxwell S. Stewart has based largely on the Twentieth Century Fund's study "Facing the Tax Problem." Mr. Stewart is also responsible for the recent revision of an earlier pamphlet, "Credit for Consumers." The pamphlets may be obtained for 10 cents each from the Public Affairs Committee, 8 West 40th Street, New York City.

Better Buymanship. "Shoes" and "Hosiery" are recent additions to the list of Better Buymanship bulletins published by the Household Finance Corporation, 919 North Michigan Avenue, Chicago. Sample copies are free.

Building America. Recent issues of this "photographic magazine of modern problems" published by the Society for Curriculum Study, 425 West 123d Street, New York City, are on "Crime," "Fuel," "Women," and "Taxes."

"A. S. T. M. Standards on Textile Materials." The American Society for Testing Materials, 260 South Broad Street, Philadelphia, has issued the 1938 volume of its annual report prepared by Committee D-13 on specifications, tolerances, methods of testing, and definitions and terms. The price of this standard publication on textile testing is $2.

Social Hygiene Year Book, 1938. "A brief summary of recent social hygiene events in the states and communities, with notes on the present favorable outlook," which originally appeared in the May-June issue of the *Journal of Social Hygiene*, has been slightly amended and reprinted as a yearbook and may be obtained from the American Social Hygiene Association, 50 West 50th Street, New York City, for 75 cents a copy.

The Busy Bee for Beauty. A million pounds or more of beeswax is used every year in cosmetics, especially cold cream and such make-ups as lipstick and rouge, says the U. S. Bureau of Agricultural Economics. This use of beeswax goes back at least to Roman times, and no satisfactory synthetic substitute has yet been devised.

NEWS NOTES

GENERAL

Conference on Marriage and the Family. The Fifth Annual Conference on Conservation of Marriage and the Family will be held at the University of North Carolina and Duke University from April 11 to 14. Further information may be obtained from the director, Professor E. R. Groves, Chapel Hill, N. C.

Consumer Education Association. This new organization is for teachers of consumer problems in elementary and secondary schools and colleges and hopes to provide opportunities for discussion, establish a central information bureau, and promote research. Annual dues are $1, the executive secretary is Carlton J. Siegler, and the address of the Association is 45 Sunnyside Avenue, Brooklyn, New York.

Conferences on Housing Societies. The National Public Housing Conference has invited Mr. J. Bommer, director of the National Council of Dutch Housing Societies, to come to the United States early in April to speak on co-operative housing societies before a series of regional conferences in the East and Midwest. Further information may be obtained from the N. P. H. C., 122 East 22d Street, New York City.

"What Price America." The U. S. Department of the Interior is presenting on stations of the Columbia Broadcasting System a series of 26 radio programs on conservation. The programs are to be broadcast at 5 o'clock E. S. T. on 26 Saturday afternoons, beginning January 28. A free booklet prepared for program listeners may be obtained on request to "What Price America," Washington, D. C.

National Rural Forum. "What's Ahead for Rural America" is the topic of this year's forum, which will be held at Pennsylvania State College from August 30 to September 2, 1939.

ARKANSAS

University of Arkansas. The steadily increasing enrollment in home economics has taxed the existing facilities, but the construction of a $10,000 home management house and a $200,000 home economics building will remedy this situation. This three-story, fireproof building will have a limestone exterior to conform with other new campus buildings.

Little Rock Nursery School. For the third year in succession the teachers of the nursery school in the Little Rock High School held open house for parents early in December. City department stores and bookstores lent exhibits of appropriate children's toys and books. As the teachers were selecting the toys, they explained to the salespeople why each was chosen. The hundred or more parents who visited the exhibit obtained suggestions for children's gifts in time to do their buying before the Christmas rush.

Student Clubs. The four district home economics club meetings held during the fall and attended by 1,500 helped to stimulate interest in the local clubs. The state club meeting will be held in April.

Extension Service. For the past three years a home demonstration agent has been employed in every county of the state, making it possible to conduct a complete, uniform state program and bringing home demonstration club activities within reach of all rural women in Arkansas. A number of assistant agents also have been employed, providing trained young women for replacements.

The home demonstration club work in the state has broadened in membership and scope of program. The 55,670 members are interested in rural social and economic problems as well as homemaking methods. The State Council of Home Demonstration Clubs has set as its goal for 1939 the enrollment of at least 40 per cent of the farm women of the state and extension of the benefits of club work to all families in the community.

CALIFORNIA

California Home Economics Association. When the state council meets in Visalia on April 6 and 7, a visit to Sequoia National Park is planned.

Student Clubs. California clubs expect to organize at a state meeting in Fowler on April 22.

San Joaquin Valley clubs held a very successful annual conclave at Sanger on December 10 with 260 girls and 18 advisers in attendance.

National Home Service Conference. California is looking forward to this Conference, which is to be held on the West Coast this summer.

Whittier College. The home economics department can now offer the A. B. degree and is permitted by the State Board of Education to offer graduates the special secondary credential in homemaking. The department expects to graduate at least four students in June.

COLORADO

Parent Education. Early in the winter Mrs. Jean Cowan Bloom, parent education instructor for Colorado, conducted a 6-week series of lessons in Otero County, with an average attendance of 428 parents. Later she was in El Paso County for 7 weeks, with headquarters at Colorado Springs. Morgan and Pueblo Counties are also included in this year's itinerary.

School for Extension Workers. A School for Extension Workers, in charge of Dr. Carl Taeusch of the U. S. Department of Agriculture, was held at Colorado State College from December 5 to 9. Topics discussed included "What Can Philosophy Contribute to a Better Understanding of the Present Situation?", "The Place of Government in Modern Society," "The Relation of Government to Social and Economic Affairs," "Regionalism, Nationalism, and Internationalism," and "Problems of Social Adjustment and Administration." Speakers included Kirk H. Porter, University of Iowa; Dr. O. B. Jesness, University of Minnesota; George P. Adams, University of California; Arthur L. Beeley, University of Utah; and Theodore Thorfinnson of the Land Utilization Program, U. S. Department of Agriculture.

Future Homemakers. A revised constitution and an initiation ceremony for the Future Homemakers of Colorado have been sent to teachers in the state. A very attractive club pin, designed by Eleanor Boyer of Fort Collins, has been ordered.

Fort Morgan. Mrs. Lucile Fee, now itinerant teacher trainer of Colorado State College, has been succeeded by Joanna Chapman.

Glenwood Springs. Jo Trumbo was married to Lester C. Findley during the Christmas holidays.

Wray. Elvera Thomas has joined the staff of the Farm Security Administration.

CONNECTICUT

Connecticut College. A new academic building, Frederic Bill Hall, is to be erected soon, thereby releasing space for the expansion of the home economics department in its present location in New London Hall.

The home economics department is participating again in the weekly radio broadcasts prepared by the College.

Margaret Chase is in charge of the nursery school which opened at the College in October, with 12 children enrolled.

Frances Gregory is an assistant in the home economics department and house fellow at Mosier House, the co-operative dormitory.

Connecticut State College has an extensive building program under way, including a home economics building.

Kathleen Dietrich, formerly of Michigan State College, is in charge of the nutrition work at the College; and Wilma Keyes, formerly of the Michigan Extension Service, of the art work.

St. Joseph College. The institution management class under the direction of Naomi Gill went to New York recently to study problems in equipment and management at New York Hospital, where Margaret Gillam, head dietitian, acted as hostess, and at the Webster Apartments, which are operated for businesswomen of limited income. Dinner at Barbetta's Italian restaurant and seeing "Hamlet" completed the profitable and enjoyable day.

Helen Zwolanek is a new member of the home economics staff.

DISTRICT OF COLUMBIA

District of Columbia Home Economics Association. Members of the District Dietetics Association were guests of the Association at dinner on January 24 at 2400 Sixteenth Street, N. W. Adela Rogers St. John, novelist and newspaperwoman, was the guest speaker.

Homemakers' Section. Mrs. F. L. Lewton was hostess for the January luncheon meeting. Dr. Ella Oppenheimer of the D. C. Health Department talked on "Problems of Health Protection for Women and Children in the District of Columbia."

In February the homemakers met at the home of Mrs. Warren H. McKinney. Mrs. Harriet R. Howe, in charge of consumer education for the A. H. E. A., was the speaker.

H. E. W. I. B.'s. The annual Christmas party was held at Brookings Institution. At their January meeting the H. E. W. I. B.'s discussed plans for the year and heard a report of the New York meeting. In February they were guests of the Electric Institute, of which Caroline Chesser is director and where Bernice Burns is in charge of kitchen planning.

FLORIDA

State Department of Education. Dr. Ruth Connor of Florida State College for Women is acting state supervisor of home economics education, while Boletha Frojen is on leave to fill a similar position in Puerto Rico.

Florida State College for Women. The Home Economics Club, which has over 100 paid-up members, is sponsoring a state meeting of student clubs on March 4 on the campus. Mrs. Margaret Butterfield, state chairman of student clubs, Margaret Walcott, state president of student clubs, and Louise Wheeler, president of the College Home Economics Club, will be official hostesses.

At the December meeting of the Home Economics Club, Marjorie Hill, president of Pi Chapter of Omicron Nu, presented its annual scholarship cup to Jean Phillips, a sophomore, in recognition of her high scholarship attainments as a freshman.

IDAHO

University of Idaho. The home economics department has a new practice house. The two-story building formerly used as the University infirmary has been converted into a modern American family dwelling with an attractive homelike atmosphere. Margaret Ritchie, the house supervisor, and Marion Featherstone have directed the furnishing.

In December the home economics staff was entertained by the home economics faculty of Washington State College at a beautifully appointed dinner at the College Commons.

On Saturday afternoons during December, Esther Segner, teacher trainer, met with home economics teachers of southern Idaho in Pocatello, Twin Falls, and Boise to discuss the new state course of study in homemaking.

The Home Economics Club is sponsoring programs showing opportunities open to home economics trained women. Mrs. Lucile Ramirez of the Washington Water Power Company of Spokane was the guest speaker in January.

Senior home economics students in the advanced methods course under the supervision of Esther Segner recently presented a panel discussion planned to describe newer methods of teaching to a homemakers' group in Moscow studying current trends in home economics.

Extension Service. Leona Curtis chaperoned the 4-H club girl champions to the National Club Congress and International Livestock Exposition in Chicago in late November and early December.

The home demonstration agents are centering their efforts on demonstrations advocating use of Idaho products, with emphasis on meat, especially the less used cuts. Charlie Mae Elliott of the National Meat Board, Chicago, recently demonstrated the preparation of such cuts in Moscow, Lewiston, Nampa, Twin Falls, and Idaho Falls. A meat-cutting school for county agents, home demonstration agents, and vocational teachers was conducted by K. F. Warner of the U. S. Bureau of Animal Industry.

Ella Gardner of the U. S. Extension Service came to Idaho to confer with the home demonstration workers regarding material for use in recreational programs for home demonstration groups.

Farm Security Administration. Ten home economists assist in the supervision of 4,000 F. S. A. loans in Idaho. Projects carried on by F. S. A. borrowers and their families under

the direction of the home management supervisors include: an adequate food production and preservation program, the keeping of adequate farm and home accounts, adequate medical attention through the formation by borrowers of group health services.

Vocational Home Economics. In Coeur d'Alene, Pocatello, and Weiser, co-operative resident schools serving rural N. Y. A. girls are again in progress. The work deals chiefly with homemaking, but there are also occupational courses in home service, catering, salesmanship, assisting in nursery schools, and dressmaking. Beulah Johnson, a '38 graduate of the University of Idaho, has succeeded Mrs. Eunice Aust as homemaking instructor at the Coeur d'Alene Cooperative N. Y. A. School.

ILLINOIS

Eastern Illinois State Teachers College, Charleston. New staff members are Helene Heye, head of the home economics department, and Marie Lindberg, foods and nutrition teacher.

Northern State Teachers College, DeKalb. A new course, Arts and Industries, is required of all freshmen enrolled in any 4-year major. It is concerned with the cultural orientation and development of students in an involved technological society. Celine Neptune is in charge of the portion given in the homemaking classes.

University of Illinois. New appointees in the home economics department include: Glenna A. Henderson and Mildred Anderson, both formerly with the extension service of the University; Dr. Marjorie Pickens, formerly assistant to the secretary of the Council on Foods of the American Medical Association; and Irene Crouch, formerly with the consumption study conducted by the U. S. Bureau of Home Economics.

On sabbatical leave are Mary Louise Chase, who has returned from a trip abroad and is now visiting the extension service in various states and in Washington, D. C.; Mary Whitlock, who is at Columbia University; and Edna Walls, who is continuing her study in child development.

At its 75th anniversary commencement last May, Kansas State College conferred an honorary doctor of science degree on Lita Bane.

Home economics is now offered at the summer session. Last summer special teachers included Dr. Esther McGinnis of Buffalo State Teachers College and Dr. Harold Anderson of the psychology department.

INDIANA

Indiana State Home Economics Association. The Association will hold its spring meeting in Muncie on March 24 and 25.

Ball State Teachers College. Mrs. Marie P. Ringle spoke on the teacher-training program at the A. V. A. meeting in St. Louis on "Preparation of Seniors for Teaching Adult Classes."

Mary Beeman spoke before the Department of Vocational Education at its meeting in Cleveland on February 27 on "New Deal in Home Economics Education."

Butler University. Kathryn Journey is on leave this semester for study at the University of Chicago. Mrs. C. A. Banks is substituting for her.

Indiana State Teachers College. Freddie, aged 3 months and weighing 10 pounds, arrived at the home management house on January 3—the second baby to be on the campus.

The Home Economics Club made 35 underprivileged children of Terre Haute happy for Christmas by inviting them to a party in the home economics clubroom in the Vocational Building on December 23. The Club also sponsored the Shima art exhibit of wood-block prints and an exhibit of pottery in December. The exhibit was open to the public during school hours, and the prints and pottery were sold as a means of making money for the club.

Purdue University. Work on a commercial research project in textile chemistry, financed through the Purdue Research Foundation, has been started by Nelle Morris. The project is under the joint supervision of Dr. Henry Hass of the department of chemistry and Dr. Marion E. Griffith, assistant professor in textiles.

Frances Schneider and Evelyn Swaim are new members of the home economics education staff. Miss Schneider teaches courses in vo-

cational education and methods and with Miss Swaim assists in the supervision of the student teachers.

Two new centers at which student teachers of home economics may participate in vocational programs have been opened at Montmorenci and Battle Ground. Mary Kathryn Culp and Jeannette Orem are the home economics teacher and supervisor at Montmorenci, and Mrs. Mabel Davis and Miss Swaim at Battle Ground.

Extension Service. One of the projects promoted by the Indiana Home Economics Association during 1938 was a "Friendly Visit" during June to nonmembers. Forty-seven counties participated, and 8,042 nonmember homes were visited. As a result, home economics extension work will be better understood and better county programs will be planned. The Association has a membership of 20,604 farm women who are members of home economics groups in 74 counties. The annual meeting is held at Purdue University during the Farm and Home Conference.

IOWA

Iowa State College. Anna Henderson, assistant professor of applied art and a member of the staff for 22 years, died on November 14 at the College Hospital following a short illness. Burial was at Washington, Iowa.

Neale S. Knowles, formerly head of home economics extension, has returned from a year's leave of absence, 5 months of which were spent on a South Sea cruise.

This fall Hester Chadderdon received her doctorate in education from Ohio State University, and Elisabeth Sutherland hers in nutrition from the University of Minnesota.

Iowa State Teachers College. Dr. Paul Popenoe spoke on "The Changing Family in a Changing World" at the chapel service on December 4. He also led two discussion groups on "Looking Forward to Marriage" and "Is There a New Morality?"

The director of the Visiting Nurses' Association in Waterloo recently described the work of the Association to the Ellen H. Richards Club. As its social service project this year, the Club is making layettes for the Association.

KANSAS

Kansas State College. Dr. Ruth Lindquist joined the staff last fall as head of the department of household economics. Other new teachers in the home economics division are: art, Mrs. Mary Holland and Rosamond Kedzie; clothing and textiles, Dorothy Manchester; food and nutrition, Dr. Pauline Nutter; and institution management, Mrs. Marguerite Morrison.

Extension Service. Mae Ferris, formerly home demonstration agent in Oklahoma, is now home furnishings specialist in place of Ruth Peck, who resigned to join the Michigan Extension Service.

Kansas State Teachers College, Pittsburg. Dr. Lillian D. Francis and Cecillia Ensman have been assisting with the state program for adult education. Dr. Francis gives courses in nutrition and finds that the women are using more protective foods. Miss Ensman's courses in home nursing are enthusiastically received.

State Board of Vocational Education. The travel teachers for adult homemaking classes have been working in many centers: Rose Cologne in El Dorado and Wichita; Mrs. Helen Brown in Hutchinson and Salina; Marie Shields in Cimarron, Goodland, Kanorado, and Brewster; Gladys Wyckoff, in Parsons and McCune.

Farm Security Administration. Additional home management supervisors have been added to the staff, now totaling 20. Schools for the field staff have been held during the fall and winter.

State Board of Health. Representatives from the Extension Service, the F. S. A., State Board of Vocational Education, State Board of Social Welfare, and the W. P. A. attended a meeting called by the nutrition service of the division of child hygiene of the State Board of Health in Topeka on December 6. The discussion centered around greater integration of programs. Pearl Rorabaugh, public health nutrition director, was in charge; and luncheon, prepared by the household trainees under the direction of Mary Louise Meuser, supervisor of the W. P. A. household training work, was served to the group.

LOUISIANA

Louisiana Home Economics Association. The two-day meetings at the State Capitol, Baton Rouge, opened on November 17 with an executive council meeting followed by a business meeting. The November 18 program included a discussion on "Home Economics in Family Living" from the points of view of a superintendent, a homemaker, a home demonstration agent, a college teacher, a high school teacher, a high school girl, and a high school boy. Out-of-state speakers were Bess Goodykoontz, assistant U. S. commissioner of education, and Alma Keys, supervisor of home economics in Arkansas. Each night the members attended general sessions of the State Teachers Association at Louisiana State University.

State Department of Education. Johne Bowles is on leave for graduate study at Iowa State College.

Marie White of the U. S. Office of Education visited the college and high school home economics departments in Louisiana during February.

Louisiana State Normal College. At present all members of the faculty are working on the curricula preparatory to changing from the quarter to the semester basis.

The Euthenics Club has taken on new life under the leadership of Joy Burnham and her group of officers, and the membership is more than treble that of last year.

Extension Service. In January, two-day meetings were held at Monroe, Natchitoches, Hammond, and Lafayette for county agents and supervisors to revise and complete their plans of work for 1939.

Junior Homemakers Club. Some 2700 young women, representing 136 clubs, attended the annual conference of the Louisiana Junior Homemakers Club at Bolton High School, Alexandria, on November 5. Vertie C. McDaniel, state president, presided at the joint meeting of the college and high school sections. The Rev. Kearnie Keegan of Alexandria was the chief speaker on the high school program, and Clyde Mobley, state supervisor of home economics, made the main address on the college program.

MAINE

Maine Home Economics Association. On December 14 the state committee on home economics education through libraries met at the State House in Augusta to complete plans for the year's work. Present were Helen E. Lockwood, Farmington State Normal School; Estelle Nason, state home demonstration leader; F. Elizabeth Libbey, director of library extension; and Florence L. Jenkins, state supervisor of home economics education.

Vocational Conference. The annual state vocational home economics conference called by Florence L. Jenkins was divided into two sections this year because of the increase in the number of home economics departments in the public schools. One section met in Bangor on December 3, and the other in Portland on December 10.

Maine State Teachers Association. A three-day convention was held in Bangor from October 26 to 28. The program for the home economics section included talks on "Guidance in Personality Development" by Helen E. Lockwood and "The Boy Shares in Homemaking" by Doris Varnam, and three demonstrations: "Personality and Consumer Guidance Through Home Economics," Ruth Crosby and pupils of Bangor and Brewer High Schools; "Mrs. Consumer Goes Shopping," Hazel Patterson and pupils of Brewer High School; and "Personality Plus," Margaret Lutz and pupils of Bangor High School.

The home economics teachers in the Maine branch of the American Vocational Association also met at this time.

MARYLAND

County School System. Ada Olsson, director and teacher in the "Husmodersskolan" (homemaking school) at Malmberget, Sweden, spent November 21 visiting the home economics departments in Montgomery County with Mrs. Miriam Beall, county chairman of home economics. Miss Olsson was especially interested in the home projects, the management of the 60-minute periods, home economics clubs, the method of pupil participation in the planning of class problems and activities, and in the participation of pupils in the preparation

of cafeteria foods. Miss Olsson's school in Sweden offers weaving, cooking, sewing, hygiene, gardening, and dairying; and the students are older than our high school pupils, with ages ranging from 18 to 25 years.

Hood College. Art exhibits sponsored by the home economics department have included works by faculty and local artists as well as by Watkins and Gates of the Phillips Gallery Art School, Washington, D. C. These displays have aroused interest throughout the county and have been visited by a number of rural women's clubs.

University of Maryland. Billy Nalley, 11-month-old son of Mrs. Paulla Nalley, is the newest member of the home management house. He is the first baby to live there, and his own mother is a member of the present group of senior girls who are doing their practice work at the house.

Plans for a new home economics building have been completed, and it should be ready for occupancy next September. The lounge in the building will be in Early Maryland style.

MICHIGAN

Central State Teachers College, Mt. Pleasant. Pauline Rogers, formerly of Albion College, is a new staff member.

About 200 high school home economics club members in Region 2 attended a meeting sponsored by the College and home economics clubs of Mt. Pleasant on December 19. Hui Lan Yeh, the A. H. E. A. fellow at Michigan State College, spoke on "Food Habits of the Middle Class in Northern China."

Michigan State College. The Kellogg Foundation is providing scholarships for 30 boys and 30 girls for 8 weeks' instruction in foods, clothing, agriculture, public health. The students are being trained for leadership in better rural living.

Ten seniors attended the field day sponsored by home economists in business in Chicago on November 18.

Detroit. *Detroit Home Economics Association.* The Association celebrated its 30th anniversary on January 19.

Wayne University. In the Secondary Curriculum Workshop, 20 members are home economics teachers.

Public Schools. Grace P. McAdam retired as supervisor of home economics last June.

The courses of study in Personal Standards, Applied Economics, and Intermediate Clothing are being revised to meet more nearly the needs as shown by curriculum studies.

Grand Rapids Public Schools. Home economics students and teachers recently visited Grand Rapids department stores to study the informative labeling now available. The retailers' problems connected with the use of adequate labeling and new codes and regulations in advertising were discussed by a store representative.

Beatrice Olson of Wayne University was the leader at meetings held on January 18 and 19 at which the home economics teachers of the Grand Rapids public schools discussed "Curriculum Building in Home Economics."

MISSISSIPPI

Mississippi Home Economics Association. Mabel Cunningham has succeeded Eleanor Noland Smith, who resigned as assistant student club adviser. Maude Smith is chairman of the home economics in health committee; Helen Hawkins heads the new committee on home economics in general education; Emily Stribling is chairman of the standardization and consumers' research committee.

Student Clubs. About 400 delegates from 250 schools and colleges attended the two-day student club session at Meridian, where the junior college was hostess to the group. High school and college sections united in an Ellen H. Richards program at the concluding banquet. Beulah Rogers was the out-of-state home economics speaker. Helen Hawkins is club adviser.

Mississippi State College for Women. New members of the faculty are Mary Louise McIlvaine, Mildred Barr Roberts, and Marian Williamson.

Extension Service. New home demonstration agents include: Mabel Ruth Adams, Rankin County; Margaret May, Stone County; Mary E. Huggins, Clay County; Doris Cole, Pontotoc County; Mary Braddock, Union County; Zell Partridge, Tippah and Benton Counties; Mary Stodghill, Jones County. These replace the following agents, who were

recently married: Dorothy McElwrath, Clay County; Jerry Robinson, Jones County; Margaret Pope, Adams County; Bessie Hanks, Union County; and Elizabeth Anderson, Jefferson County. Moline Cargile was transferred from Rankin to Jefferson County.

May Haddon, extension nutritionist, returned to duty in February after six months of European study.

MISSOURI

Missouri Home Economics Association. During the meeting of the A.V.A. in St. Louis, the Missouri home economists gave a tea at the College Club of St. Louis for the women attending the convention.

The spring meeting is scheduled for March 31 and April 1 at the Jefferson Hotel, St. Louis.

Central Missouri State Teachers College, Warrensburg. On November 12 the home economics teachers of this district met at the College for an all-day session to consider further work on the curriculum. Mabel Cook from the State Office of Home Economics led the discussion.

A home economics reunion took place on December 10, when the Founders Day banquet of Kappa Omicron Phi was held.

Christian College, Columbia. A four-semester course in homemaking was initiated this year. During preregistration the class capacity was completely filled. Dr. Theta Holmes Wolf is in charge.

The Student Club has put on an active and varied program, interest in which has doubled the enrollment.

South East Missouri State Teachers College, Cape Girardeau. Helen Bedford of the art department spoke to the southeast Missouri district teachers meeting in October, when 30 home economics teachers attended the departmental meeting.

South West Missouri State Teachers College, Springfield. The home economics department participated in the Fifth Annual Agricultural Improvement Meeting held at the College from January 11 to 13. Marjorie Hamilton of the art department was one of the speakers. The honorary Home Economics Society helped with arrangements. It also has sponsored a series of radio programs on "Consumer Buying."

University of Missouri. Virginia Batie White was added to the home economics staff last fall.

Speakers before the Home Economics Club on opportunities for home economists have included Julia Coburn of the School of Fashion Careers and Dr. Marietta Eichelberger of the Evaporated Milk Association.

MONTANA

Montana State College. Joanna Karttunen, who has taught for several years in the Home Economics Institute at Jarvenpaa, Finland, is attending the College this year on an A.H.E.A. foreign fellowship. Miss Karttunen holds a master's degree and has been the recipient of many honors in her own country.

Dr. Jessie E. Richardson and Mrs. Helen L. Mayfield of the Experiment Station staff attended a conference of nutrition workers in Spokane on October 7 and 8 to discuss the co-operative project being carried on by five northwest states. Dr. Richardson later prepared a report of this project for the Land-Grant College meeting in Chicago in November.

University of Montana. New members of the home economics staff are: Mrs. Bernice Papworth, just returned from four years in Japan, who is supervisor of the new home living center and instructor in related subjects; and Agnes M. Brady, who has been on a fellowship at Louisiana State University and is now supervisor of student teachers and teacher training and instructor in courses in methods.

Extension Service. Mrs. Doris Ingram Anderson, home demonstration agent in Yellowstone County, has received the Epsilon Sigma Phi award in recognition of her services.

Mrs. Neva Woods Magraw resigned as home demonstration agent in Lewis and Clark County on January 1, closing ten years of service in that county. She will be succeeded by Lillian Stone, agent in Beaverhead County.

OUR CONTRIBUTORS

Dr. C. E. F. Guterman was made assistant director of the New York State Agricultural Experiment Station at Cornell University in 1936 after having served six years as assistant professor and later professor of plant pathology at the University.

Helen Mae Camp received her M. A. from Texas State College for Women in 1937 and is now teaching. **Ercel Sherman Eppright,** director of home economics at the College, received her Ph. D. from Yale in 1936.

Elizabeth A. Rivers took to her present position as regional chief for home management in the Farm Security Administration in Milwaukee, Wisconsin, a background of experience as a high school and university teacher, home management house director, and state home economist with the Minnesota Relief Administration.

Martye Poindexter heads the applied arts department at Texas Technological College. **Nell E. Dearmont** is district supervisor of homemaking education at Fort Worth, Texas. **Marguerite Trauger True,** now a homemaker of Grosse Pointe, Michigan, majored in textiles and clothing at Cornell and included household arts among her electives. **Mary Elizabeth Starr** art teacher at the University of Washington and an expert weaver herself, spent last summer in Sweden studying this art there. **Mrs. Dora W. Erway** is assistant professor of household art at Cornell University and advisory editor to the JOURNAL OF HOME ECONOMICS.

Mildred Horton, vice-director and state home demonstration agent in the Texas Extension Service, is chairman of local arrangements for the San Antonio meeting of the A. H. E. A. next June. This year she has served as chairman of the extension service department of the Association.

Mattie A. Trickey is associate state director in charge of home management in the Farm Security Administration, Dallas, Texas.

Edith M. Barber is a New York free-lance writer and consultant on nutrition. Since 1927 she has edited a daily food column in the New York *Sun*.

Margaret B. Hays, associate textile physicist at the U. S. Bureau of Home Economics, is a frequent contributor to the JOURNAL.

Anne Brohel Searle and **Esther Naomi Chapman** are members of the research staff of the Pennsylvania Experiment Station, and **Elizabeth Douglass Roseberry** was formerly a member of the staff